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Sweden's way to knowledge

"Knowledge policy and knowledge
traditions in higher education" was the
puzzling title chosen by Sweden's
National Board of Universities and
Colleges as one of the themes for an
international conference it organized
earlier this month. "Knowledge policy",
the first part of the title, is an
absolutely unfamiliar term in Britain;
"knowledge traditions", the second
part, is almost as unknown outside the
ranks of philosophers of science and
those with a particular academic inter-
est in social interpretations of know-
ledge.

Yet the issues that are disguised by
these unfamiliar terms are not obscure.
The most profound perhaps is how to
reconcile the rival attitudes of theory
and practice; the most practical how to
cope with the worldwide phenomenon
of "academic drift", to give it its British
name, or "Scientification", to adopt a
more internationally understood term;
the most important how to balance the
morality and the rationality of schol-
arship and science.

The post-war expansion of higher
education sucked in training in profes-
sions that played no part in the tradi-
tional university, partly because the
growing sophistication of knowledge
and the increasing elaboration of these
professions required higher level train-
ing, partly because the pressures of
upward occupational drift and
credentialism obliged these profes-
sions to "join" higher education or else
lose status.

The rise of the para-professions has
been accompanied by other equally
radical phenomena: the widening of
the student base has led to demands for
a broader undergraduate curriculum,
which because of the explosion of
knowledge is a very different enter-
prise from the liberal education of half
a century ago. The social ambitions of
the old humanities have been revived by
the social sciences, but in a much
more sharply contested form. Music,
art and other expressive subjects have
been more fully incorporated into the
mainstream of higher education.

So in most advanced countries since
1945, and most powerfully since the
1960s, higher education has been in-
vaded by new intellectual values: prac-
tical, aesthetic, ethical, social, which
have been regarded by some as subver-
sive of the austere academic and
scientific values embodied in the uni-
versity. Of course, this tension is not
new. Practical values have always had
a place in the university; the theoretical
sciences grew out of the practical
sciences; and the other way round, and
extra-scientific values have always ex-
ercised considerable influence over the
priorities and progress of individual
disciplines and over the social shape of
the university.

But this tension between theory and
practice, between science and other
traditions of knowledge has perhaps
only been made fully explicit as a result
of the post-war expansion of higher
education. In Britain, we may have
always had a binary policy that to some
degree institutionalized this tension;
it was only in the 1960s that we felt
the need to give it explicit formality.

The Swedish conference adopted an
anti-binary policy. During the 1970s
they formed comprehensive universi-
ties which incorporated these new
and less academic subjects and also
many formerly independent research
institutes. Yet academic drift is com-
mon to both countries. In Britain it
may be a subversive process in the
sense that the binary policy is designed
to mitigate it while in Sweden it may be
almost compulsory as (Henry) all new
teachers have to have PhDs and all
programmes a research component.
But the outcomes are remarkably
similar.

However, academic drift is only half
the story. The other and perhaps more
important question, provided by the
new theme of "knowledge policy", is
whether higher education has become

dominated by an over-narrow scientific
tradition, a tradition that is mechanis-
tic, amoral, and dismissive of values
that cannot be reduced to reason. This
is a very complex question that must
take into consideration the develop-
ment of a powerful research culture,
the erosion of the once incestuous links
between traditional universities and a
privileged social order, and similarly
profound trends.

However, there is one overarching
question that is worth considering. To
what extent is there an inevitable
tension between the severely cognitive
values of more traditional academic
disciplines, particularly in the natural
sciences, and the less cognitive values
of the older more humanist and newer
more practical disciplines? Or is the
tension that certainly does exist a
secondary phenomenon, the expres-
sion of the particular social hierarchy
that has been attached to different
styles of knowledge?

These are important questions. It is
one thing to say that physicists or
historians enjoy higher status than
those engaged in social work or nurs-
ing. But it is quite another to claim that
the former are distinct or superior
expressions of knowledge. If it is just
the former, the policy strategy should
probably be tilted towards the Swedish
comprehensive solution; if the latter,
towards the British binary solution.

But can science provide a secure
university? The answer to the question
superiority is the former? Or, con-
versely, is it fair to depict science as
some kind of Cartesian model which
is the inevitable enemy of extra-
academic values that are based on
individual or collective morality, or
unreflective practice, or aesthetic sen-
sibility? These are the core questions of
"knowledge policy" which the conference in
Sweden tried to address.

Technocratic ambition has to be distinguished from the tradition of scientific inquiry associated with Descartes and Newton

It is important to make a distinction
between the means and the ends of
science, between its principles and its
ambitions. A starting point for many
people engaged, knowingly or not, in
"knowledge policy" is the poverty of
technocratic thought. It aspires to
provide a complete intellectual de-
scription of the natural world and of
man's place in it, but it can only
succeed by the sustained inhibition of
our moral intuitions. Moreover, it
conceives of the reality it seeks to explain
as a closed system. So "knowledge" can
never be reduced to reason.

But such technocratic ambition has
to be distinguished from the tradition
of scientific inquiry associated with
Copernicus and Bacon, Descartes and
Newton. The search for "objective
truth" or at any rate dispassionate
truth, is both central to the mission of
the university and the foundation of a
secular, free and dynamic society.
Scientists by their very nature model and
simulate. It is most important principle
of Karl Popper's "I know that I do not
know". All the rest is provisional
knowledge that may one day be re-
placed by more satisfactory explana-
tions.

So science is not the enemy of
humanity. It is the enemy of
positively dogmatic belief. It does not
patronize (to science) may be de-
terminative to society.

new hypothesis is conceived; only that
it can be tested or falsified. Science
does not despise metaphysical ques-
tions like "does God exist?" although it
cannot answer them through a process
of reason. Nor is high-tech medicine or
nuclear power inherently more scien-
tific than low-technology healing or
alternative sources of energy.

A second distinction must also be
emphasized. Our present "knowledge
tradition" is a broad church that in-
cludes more than positivistic science.
"Knowledge" can certainly be based
on reasoning and experiment; but it
can also be based on faith or tradition,
aesthetic values, practical experience,
and aesthetic sensibility. Individual
disciplines or traditions of professional
education generally incorporate ingre-
dients from several of these distinct
forms. Physicists and mathematicians
will insist that their subjects have an
aesthetic quality, while we do have
theology departments even though it is
impossible to prove or disprove the
existence of God.

The state of Marxism illustrates the
complexity of knowledge. Marx's de-
tailed predictions can be tested, but his
overall conception remains perhaps a
metaphysical one. In eastern Europe
Marxism has become a faith or compul-
sory tradition, while everywhere some
people have chosen a Marxist perspec-
tive as a matter of ethical choice. So
what emerges is a deeply interwoven
intellectual tradition that incorporates
many of the values of knowledge.

Knowledge traditions, moreover,
are hardly traditions at all. They are
volatile, constantly changing, and at
best constantly subversive of their
own concepts and data. So perhaps the
best way to regard our knowledge
tradition is as a spectrum of disciplines,
some more or less cognitive, and
each discipline in turn as a spectrum of
values, cognitive, dogmatic, ethical,
practical and aesthetic. And these
spectra between and within disciplines
are constantly changing under these
same pressures, reason, tradition or
authority, morality, aesthetics.

If these two conclusions, that the
methods of science cannot be de-
scribed as imperialist whatever may be
said of the ambitions of technology and
that our knowledge tradition is much
broader and more liberal than many
imagine, are accepted, there are im-
portant implications for "knowledge
policy". They lend little support to the
idea of a permanent binary policy (or
its American equivalent of a chaotic
but intensely hierarchical diversity of
institutions), because they suggest that
it is not possible to distinguish clearly
between different knowledge tradi-
tions and also that the dominant
"academic" culture is much less for-
midable and more flexible than such a
policy suggests.

These conclusions also cast a new
light on the very necessary efforts to
reinforce or restate the humanism of
higher education. They suggest that
science is not the enemy of such efforts
and that within our present knowledge
tradition there is plenty of room for
extra-scientific values. Indeed, the
modesty and tentativeness of true
science are a guarantee that this room
will always be found. So to build these
efforts round an anti-science crusade is
not only dangerous because it is a
road to a ridiculous marginality within
higher education but also unnecessary.

Against this background, the Swed-
ish way seems to make more sense than
the British way. It is based on the
idea of a broad church and the task is to
make it broader still. But perhaps this
social democratic Sweden, in Britain in
contrast, we have argued distinctions
that are difficult to defend in principle
and which potentially frustrate and
stagnate the efforts of one of the
highest education values: pulling the
diverse links within the liberal tradi-

Laurie Taylor



Ah, there you are. My word, it's nice to
have a pleasant day for a change. Still,
it is supposed to be the Midsummer's Day.
Now then, how's the big wide world
treating you?

Quite well thank you, Sir... apart of
course from this little matter.
Quite. Quite. I'm sure we will be able
to sort it all out to everyone's satisfac-
tion. What exactly seems to be the
problem?

Well, Professor Lapping, as I explained
in my letter to you, I was thinking of
appealing against your decision to fail
my doctoral submission.

Appealing?

Yes, sir.
Against an academic decision?

Yes, sir. But first of all I want to know
exactly why I failed.

Well, as you know, Norman - it is
Norman isn't it? - yes, I thought so -
never forget a face - yes, although the
actual details of the examiners' report
have to remain confidential - and I'm
afraid that's a matter of University
Statutes - nothing you or I can do
about it, much as we might want to - I
am prepared to tell you - strictly off the
record, you understand - that it was
said by the examiners - both internal
and external, I might say - that your
work was not quite up to doctoral
standards by virtue of its unsatisfac-
toryness.

I see.
Between ourselves, Norman, I think
it might also be safe to say it was felt to
be just a little below standard.
For any specific reason?

Yes, I think one might say - and please
don't quote me on this - but basically
because of its unsatisfactoriness. Does
that clear up your little problem?

I'm afraid not, sir. I still feel that I
would like to make a formal appeal.
Yes, well, that's your right. As you
know, unlike some other institutions
we do indeed have an appeal proce-
dure which may be set in motion. But
first a case must be made. Are there
any clear grounds?

I received no help at all from my
supervisor.
Well, yes. But ideas of "help" are
always relative, Norman.
He never once asked to see me during
the entire three years.

Mmmmm. As you know, Norman,
supervision is always a two-way pro-
cess.

But he failed to respond to 11 letters.
Post can go astray.

And refused to reply to 14 phone
messages and failed to return three
draft submissions of my eventual thesis.
There certainly does seem to be prima
facie evidence of some misunderstanding
there, Norman. In the circum-
stances I'm happy to allow you to
continue to the formal stage of the
Appeal - an Appeal which, I might
add, is designed in such a way as to
mitigate the type of objective and ration-
al criteria which lie at the heart of our
graduate assessment. You under-
stand?

Yes, sir.
Fully?

Yes, sir.
Fine. If you'll just roll up your sleeve,
I'll get my secretary to bring in the
bucket of boiling water, Rosemary!

© THE TIMES NEWSPAPERS
Printed by Times Newspapers Ltd. 5, 6, 7, 20
Abchurch Lane, London EC4N 3DF. Printed
and published by the Times Newspapers
Ltd., 5, 6, 7, 20 Abchurch Lane, London
EC4N 3DF. Registered in England. No. 100
of the Press Office. (S44) 000000

The Times Higher Education Supplement

July 1, 1983 No 556 Price 50p

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Industry link needs 'big money'

by Jon Turney
Science Correspondent

More money for successful institutions
and tighter control over research
strategy are the main prescriptions for
enhancing links between industry and
higher education in a report to the
Government this week from its two
main science policy committees.

As expected, the report from a
working group of the Advisory Council
for Applied Research and Develop-
ment and the Advisory Board for the
Research Councils calls for two new
million-pound funds to encourage
universities and polytechnics to fight
for industrial contracts.

But it also makes clear that the
money will only go to institutions
which can show real efforts to tailor
their research more to industrial needs.
Sir Alan Muir Wood, the group's
chairman, said: "We want to see a
measure of corporate strategy on the
university scene."

The working group, set up last
year at the Prime Minister's re-
quest, concluded that the initiative for
forming new academic-industrial links
by higher education institutions
to use the way it proposed an "indus-
trial seedcorn" fund worth 25p in the
pound for institutions which won in-
dustrial contracts, starting at £10m a
year and intended to rise to £25m
within five years. This would be funded
by the Department of Trade and
Industry and the Department of
Education and Science and adminis-
tered by the Science and Engineering
Research Council.

It also advocates a second "pump-
priming" fund of £5m a year
available for schemes designed to
promote commercial links in individual
institutions. A similar scheme has
already been formulated within the
DTI and is likely to be approved soon.

In universities, the report says the
University Grants Committee should
encourage money for research and that
this should be set at a level which
allows average academics to spend 30
per cent of their time on research.

Work done in each university should
be scrutinized by institutional research
committees, as advocated in the Meri-
ton report last year and the ACARD
study says universities should reallo-
cate research effort to give "a better
balance between basic and more ap-
plied research".

The report also calls for a clearer
definition of the polytechnics' role in
industrial research, including arrange-
ments for earmarked research funding
and a change in the law to allow poly-
technics to negotiate contracts and
commercialization.

Encouragement for industry to re-
spond to these initiatives rests mainly
on exhortation. The report says the
Confederation of British Industry, the
Royal Society of Arts and similar
bodies should urge firms to exploit
academic expertise.

Mr Geoff Purkitt, chairman of the
University Directors of Industrial
Research, said that the pump-priming
fund was exactly what was needed.

Mr John Akker, deputy general
secretary of the Association of Uni-
versity Teachers, also welcomed it.

Improving Research Links Between
Education and Industry,
HQS 24/83

'No merger, no cash' threat to defiant Ulster

by Ngalo Creguer, David Jobbins
and Paul McGill

Ministers this week threatened to with-
draw funding from the New University
of Ulster if it gets its face against a
merger with Ulster Polytechnic.

Their determination was made clear
after the NUU court failed to give the
three-quarters majority needed to give
constitutional backing to the propo-
sals.

The planning process will now con-
tinue without the NUU and the De-
partment of Education (Northern Ire-
land) said student intakes would not be
funded from October 1984, the
target date for the opening of the
new institution.

Sir Peter Swinnerton-Dyer, chair-
man of the Ulster steering group,
washed his hands of the NUU and
declared that a new university would
still be created, based on the
polytechnic alone.

He spoke only hours after learning
of the NUU court decision. The vote
was 71-41 in favour of going ahead,
but this was only a 63 per cent majority.
Despite support from the senate, the
council and the campus unions, a
sufficiently strong rally by local MPs
and business people on the court
blocked the plans.

Sir Peter's determination to go
ahead was backed by Mr Nicholas
Scott, parliamentary under secretary
of state. He said the court's decision
was an obstacle to a new institution,
in the creation of a new institution, but
it would not be allowed to create any

new institution.

Brunei University is to exclude from its
welfare booklet given to new students
information about the Citizens Advice
Bureau, the Community Relations
Council, the Contraceptive Advice
Clinic, mental treatment, the Family
Planning Clinic, the International Stu-
dents House, Link (a counselling ser-
vice), Release (advice on drugs), and
VD clinics.

According to student union president
John Flanagan, the university welfare
and amenities committee also wanted to

get rid of reference to the "Samar-
itans." But after long argument, with
the student representatives saying they
would hold the university responsible if
there were any student suicides, they
gave in.

"I am amazed that they want to do
this. They want to return to the Victo-
rian era."

Professor J. Burnett, chairman of the
committee, said they wanted to give
emphasis only to those agencies avail-
able in the university.

Dr William Birch, chairman of the
Committee of Directors of
Polytechnics, has resigned from the
board of the National Advisory Body
in a shock move.

The news, contained in a confiden-
tial letter to Sir Keith Joseph, Secre-
tary of State for Education, is the first
blow to the NAB as it begins to
construct a national plan for public
sector higher education.

In the letter, a copy of which went to
Mr Christopher Ball, the board's chair-
man, he is believed to have given
similar reasons to those put to Sir Keith
in the name of the CDP at the end of
May.

The last meeting of the CDP discus-
sed the option of withdrawing from
completely from the NAB but rejected it.
Instead Dr Birch outlined in letters
to Sir Keith and Mr Ball the CDP's

doubt or uncertainty about future
plans for the province.

"The government decision in March
last year that the future structure of
higher education in Northern Ireland
should comprise two major university
institutions, the Queen's and the new
institution functioning with a com-
plementary relationship, still stands,"
he said.

Prominent among those against the
merger was Mr William Ross, official
Unionist MP for Londonderry. He said
his opposition was based on the failure
of the Government to provide essential
information on costs, distribution of
courses between the various parts of
the new institution, and the safeguard-
ing of academic standards.

Mr Ross accused ministers of using
"blackmail" by threatening to cut off
the NUU's funds. He would certainly
vote against the merger again if more
information was not forthcoming by
July 21, when the court is to meet
again.

On Tuesday he appealed to the
Prime Minister to look again at the
merger and is to seek an adjournment
debate.

Mr Scott gave the steering group full
authority to proceed with the new
institution on the established time-
table. Sir Peter said the court decision
had left only two options, to try to get
round the court by legislation, or to
proceed without them. He was not
prepared to wait for the NUU to
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change its mind.

The five-page report, signed by the
Committee of Vice-Chancellors and Prin-
cipals, and Dr William Birch, chairman
of the Committee of Directors of
Polytechnics, is based on the work of a
joint working group.

It finds that the sharing of teaching
provides the greatest scope for coop-
eration at undergraduate level and
forecasts an increase in such activity
when small departments, such as cer-
tain modern languages, are threatened

with reduction or closure. Some spe-
cialized joint degrees are also con-
templated.

Several areas of existing collabora-
tion are listed, including the sharing of
laboratory equipment and the joint
planning or teaching of postgraduate
courses. Student services, library fac-
ilities and some research activity are
also highlighted as examples of areas of
sharing.

National controlling bodies are
asked to provide a structure which
provides maximum flexibility in the use
of resources to encourage further in-
itiatives. It adds: "And above all, we
ask that they do not inhibit institutional
cooperation by imposing some formal
coordinating machinery which is in-
sufficiently flexible to accommodate
the wide variety of existing links."

It was generally known that Dr Birch
had been unhappy for some time with
the stance of the board on these issues
and with his role within it. But other
directors were taken aback by the news.
Dr Michael Lewis, the CDP secre-
tary, knew nothing of the sudden deci-
sion of his chairman. He pointed out

however that although Dr Birch was
nominated by the CDP, the appoint-
ment was made for him to serve in a
personal capacity.

A small group of polytechnic di-
rectors was aware of Dr Birch's plans,
including Mr Geoffrey Hall of Bright-
on Polytechnic. He said: "While I can
understand his wish to resign from the
NAB board because of his frustrations
with the deliberations, I nevertheless
feel that it is a sad decision."

The questions of Dr Birch's resigna-
tion and the nomination of a successor
will be discussed at next Tuesday's
NAB committee meeting. It will be the
first chaired by Mr Peter Brook, the
new under-secretary of state for higher
education. Dr Harold Law, the vice-
chairman of the CDP and director of
Portsmouth Polytechnic, is a likely
candidate.

Dr Birch was not available for
comment this week.



Mr Harold Macmillan, chancellor of Oxford University, with Lord Briggs, provost of Worcester College, during celebrations of the seven hundredth anniversary of the founding of the former Benedictine Gloucester College. Worcester now occupies some of its buildings.

University and poly chiefs call for local collaboration

by John O'Leary

The polytechnic directors and univer-
sity vice chancellors this week took the
unprecedented step of issuing a joint
statement in support of local collabora-
tion between their institutions. But
they came out against national
arrangements linking the two sectors.

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comment this week.

News in brief

Longer hours peace formula

Hopes rose this week of an end to the dispute over longer teaching hours at Croydon College where dismissal notices have been issued to all 300 lecturers.

Lecturers have now been offered a compromise which means an extra hour's class contact for existing staff, but two extra hours for anyone joining the staff after September.

The Nuffic branch is to consider the offer next week - but the negotiators are not at this stage recommending acceptance. It is understood that if the union takes the issue to the Advisory, Conciliation and Arbitration Service, the new offer will be withdrawn.

Rhodes meet

More than 800 former Rhodes scholars and their families from the Commonwealth, West Germany, and the United States have been celebrating the 80th anniversary of the academic foundation in Oxford this week.

Cecil Rhodes, who made his fortunes from the mines in southern Africa, left a £4m bequest to fund the scholarships. He wanted scholars elected for qualities of mind, moral character, and love of study, as well as academic merit. Women could not be considered until the terms of his will were altered after the 1975 Sex Discrimination Act.

A-level warning

Higher education institutions and employers are warned today that the A-level grading scheme is preventing examination boards from discriminating properly between candidates at the critical mid-point of the scale.

A booklet published by the Joint Matriculation Board claims that the narrowness of the grade C band, which normally contains 10 per cent of candidates compared with 15 per cent in the two bands on either side, is the major weakness. It wants the central grades to cover equal proportions of marks.

Degree protest

Students at Sussex University have publicly dissociated themselves from the award of an honorary degree to Malaysian deputy prime minister Mr. Moha Hissam in protest at his record on human rights.

They say he has been responsible for the detention without trial of thousands of political opponents, the suppression of basic rights of lawyers, academics and students, and the administration of a system of justice which had led to the execution of at least 35 people.

Extra security

Bristol University is to appoint seven additional security staff because of "the recent attacks made upon the university." There have been a number of demonstrations recently at the university involving the animal liberation front. In a separate incident one office has been burgled.

First duty

Mr Peter Brooke, under secretary for higher education, performed his first public ministerial duty when he opened a House of Commons exhibition mounted by Trent Polytechnic's department of visual communication and the Freshwater Biological Association. The opening was attended by members of both Houses of Parliament and members of the Natural Environment Research Council, which largely finances the FBA.

Liberal post

Mr Graham Watson, a 27-year-old PhD student at Paisley College of Technology, has become personal assistant to Liberal leader Mr David Steel. Mr Watson will also be secretary to the parliamentary Liberal party and will help coordinate party policy.

BTEC is quick on the draw

by Felicity Jones

The Business and Technician Education Council has made a statement, even before it has officially taken up its responsibilities, calling for a strong work-related non-degree provision in any reshaping of the maintained sector higher education system.

A meeting of the council last week, whose membership is drawn heavily from industry and commerce as well as education, viewed with growing concern the proposals being put forward for the future shape of the system which suggest that through "upward academic drift" the needs of employers and professional bodies could best be met by an all-degree system.

As an alternative to this view, the council wants to see a positive strengthening of work-related higher education as a national priority maintaining that the government, em-

ployers and trade unions have "long been united in their criticism of the education system's failure to ensure sufficient industrial and commercial relevance in courses".

The BTEC has shown its cards at this early stage when the future of local authority higher education is being decided through the National Advisory Body even though the council does not take over from the former Business Educational Council and Technician Education Council until October.

The remit given to the new council by the Secretary of State for Education and Science was to advance the quality and availability of work-related education for those in or preparing for employment.

With BTEC expected to cater for some 150,000 new students annually in a range of courses relating to commerce and industry, it has a vested interest in making its position known at this crucial stage of those

discussions over the future of higher education.

It points to the government strategy on the one hand to reduce the funding to maintained sector institutions while on the other waiting to increase the number of trained technicians who can make a contribution to economic growth.

The council argues for an increase in the current level of BTEC higher national certificate and diploma courses through consultation with employers, local education authorities and colleges so that the courses reflect the changing needs of industry.

Its programme of two-year fulltime and three-year sandwich and part-time courses will, it believes, also enable "science staff and learning resources" in the local authority system to be directed as a priority towards the education of those "needed to increase the effectiveness and efficiency of industry and commerce".



Members of the British team to the World Student Games, which opens today in Edmonton, Alberta, leave Gatwick Airport. Highlights of the games will be shown on Channel 4 on July 10 and 17. Features, page 9.

Engineering takeover should reach target

by Jon Turney
Science Correspondent

The Engineering Council's plans to take over the registration responsibilities of the Council of Engineering Institutions and frame its own by-laws are on target for completion before the end of the year.

An extraordinary general meeting of the CEI next week will ratify the surrender of the older body's Royal Charter and other arrangements are going ahead on the assumption that this will take place.

The coordinating committee of the Engineers Registration Board has published a handover report to the Engineering Council, highlighting issues which need to be resolved.

These include the academic standards, recognition of chartered engineers, technician engineers and engineering technicians, and the status of these qualifications with employers. These problems will pass to the Engineering Council when it takes over the EIRB's work in mid-September.

The new council will then have to step up the pace of policy initiatives to mollify critics who allege the council is devoting too much time to organizational details. The council's

first annual report, published this week, is mainly taken up with the administrative structure which has been designed to power the "engine of change" called for in the Finiston report three years ago.

The council's report reveals that its budget for the first year of operation was nearly £600,000, mainly spent on office rent and equipment as few staff had been recruited before this spring. So far, the council has produced a single policy statement, though further statements are expected later this year, notably on education and training.

A further statement this week gives details of the council's proposals for an engineering assembly. The assembly is intended to meet for two days every year to give elected engineers a chance to comment on council matters.

Regional elections will be organized for registered engineers, to meet concern that the council itself has no provision for elected members. Regional representation is likely to be based on the existing regions recognized by the CEI, which both councils agree should be continued.

Council urged to drop fees plan

College lecturers have warned that plans by Cheshire County Council to charge 18-year-old students fees for further education courses may force many to give up their studies.

The plan, to be discussed by the county council next month, was designed to bring Cheshire into line with other authorities in the North West. But the lecturers' union, the National Association of Teachers in Further and Higher Education, said this week other authorities - unlike Cheshire - operated educational maintenance allowances.

The union is appealing to councillors to drop the proposal, which would mean 18-year-olds facing fees of £294 a year and substantial examination charges after September. Previously, students aged less than 19 at the start of their courses have not been charged.

Ms Judith Summers, secretary of Nuffic's liaison committee in the county, estimated that 1000 students already on courses could be affected. "Our assumption is there will be a considerable drop out from existing courses and possibly course closures."

The authority said that the issue was still under discussion and confirmed that a final decision would be made on July 21.

Anger as YTS rise is refused

by Patricia Santinelli

The refusal by Mr Norman Tebbit, Secretary of State for Employment, to sanction a £1.45 rise in the £25 Youth Training Scheme allowance, led to predictable criticism from trade union leaders this week.

Mr Tebbit vetoed the increase, recommended at a stormy meeting of the Manpower Services Commission last week, on the grounds that the success of the scheme would be endangered by any increase. The MSC had accepted the overall financial limits for the YTS at the outset, he said, and a rise could only be funded within the existing budget by "cutting out some youngsters" from the scheme, cutting the quality of training, or asking employers and other sponsors to put in more money of their own.

However, Mr Peter Dawson, general secretary of the National Association of Teachers in Further and Higher Education, said this week: "The refusal of the Secretary of State to increase the allowance, despite the MSC's recommendations, will have a terrible effect on the way young people perceive the scheme. It will also affect the trade unions' perception of it. The suspicion that the Government is intent on driving down youth wages will have been strengthened."

Mr Tebbit's refusal came in response to a letter from Dr David Young, chairman of the MSC, asking for an urgent decision. Mr Young explained how a majority of the commission's members had voted for a rise of between £1.45 to £1 in the allowance, to take account of inflation since the Youth Task Group reported last year.

Mr Tebbit's decision is hardly surprising. Already last week he nixed out further Government funds for the scheme - according to the MSC, the rise in allowances would cost an extra £23m in a full year on top of the £18m allocated.

Mr Young said last week that both CBI and Association of County Councils members had voted against the rise because it would have to come out of the £1,850 grant employers receive for Mode A training. This could only lead to withdrawal from the scheme, reduction of places and quality of training.

Mr Young also offered a new reason for opposing the rise. An increase would limit the number of places for 17-year-old unemployed schoolleavers - especially now that there will be more with the inclusion of those who have already been on vocational courses - both because of the increase in the number of 16-year-olds and employers would offer fewer places.

Mr Young said that he doubted TUC members would withdraw from the commission if the allowance was not raised. All three TUC members voted for a £1.45 rise, although originally they had sought an increase of between £3 to £5 a week. They were supported in this by Dr M. Green of Strathclyde Regional Council. Mr Wilson Longden, the education representative wanted a £1 rise or four per cent.

Open winner

An Open University student has again won the top individual prize open to all university, polytechnic, and college students in the young historians of the year competition run by *History Today*. Mrs Sarah Bussy won with an entry on the Labour victory in Winchester in 1945.

Polys' conversion follows EOC lead

by Felicity Jones

Three polytechnics plan to start "conversion courses" which will enable women with A levels to take a science or technology degree course.

The university Grants Committee last year effectively blocked proposals from Bradford, Dundee, Surrey and Essex Universities, which had responded to approaches from the Equal Opportunities Commission to start one year conversion courses.

The UGC maintained that the sciences were oversubscribed and refused to allow the four universities an additional allocation of places. The universities in their turn did not feel able to go ahead with the courses without the UGC's backing.

As a result of the publicity surrounding the UGC's refusal, three polytechnics - South Bank, Sunderland and Huddersfield - plan to start similar courses this October.

The Polytechnic of the South Bank's course is a one year full time Technician Education Council higher certificate in electronics for women with one A level which need not be in a science subject. The polytechnic's deputy academic registrar, Margaret Jacks, said it hoped that 20 students would start on the new course and some would transfer to the second year of degree courses in electronics or information technology.

Money to run the course has come from the Government's information technology funds. Since the students will not qualify for a mandatory local authority grant, £2,000 plus fees will be

provided through the EEC social fund for each one.

The Equal Opportunities Commission, has been disappointed by the attitude of some universities and their senates to conversion courses. However, some, including Dundee and Bedford College, have shown interest and are hoping to make arrangements for students with arts qualifications to enter science-based courses.

Ms Lynda Carr, the EOC's education principal said: "There is a strong feeling that a good student is a good student who will get there if she is good enough. It is seen very much as positive discrimination. But the commission sees the courses as short term measures which will probably be unnecessary with the next generation of students."

The tide of opinion is changing since many universities are anxious to increase women's participation in science courses because they generally get good candidates. Engineering faculties in particular have expressed a strong interest in these courses as a way of increasing the number of women students.

● In its seventh annual report, the EOC says that discriminatory views still hold in the education and training world. The commission is supporting the case of a woman student who received a mandatory award to study from the local authority but when she became pregnant was refused a discretionary grant.

Equal Opportunities Commission Annual Report 1982, £3 from Overseas House, Quay Street, Manchester M3 3HN.

Admission reforms gain Oxford support

by Paul Flather

New proposals to make the admissions system to Oxford "fairer and simpler" passed their first major test this week when a majority of the 28 colleges indicated their broad support.

The support came in a straw poll taken at a special meeting of college representatives on Monday and it now seems that the package of reforms - including the abolition of the seventh term entry examination - are likely to be approved when a final decision is made in November.

The reforms were presented to the colleges' committee on admissions last month by a committee of 14 members headed by Sir Kenneth Dover, president of Corpus Christi College. They are the most wide-reaching reforms at Oxford for 20 years.

The Dover Committee proposes just two modes of entry, by examination in the fourth term of the sixth form, or by conditional offer at any stage of a candidate's career, with all assessments taking place together in November and December.

It is widely thought the proposals will encourage more state school entrants to Oxford, meeting one of the underlying criticisms of the system. At

present equal numbers of state and private schools enter Oxford, while at other universities it is three to one in favour of state school entrants.

A number of colleges including Queen's, however, remain opposed to the committee's most radical proposal - to abolish the seventh term examination, on the grounds that a "fair" system of examining all categories of applicants could be designed.

The Dover committee report said that no one could deny the seventh term could be of value to students, but its abolition was the price that has to be paid to make the system fairer. Many state schools could not afford seventh term coaching.

The debate on the reforms, along with a number of amendments proposed at the meeting will continue in colleges throughout the summer. One amendment certain to be carried is for organ scholarships to be exempted from the general abolition of entry awards.

Dr Oliver Tiplin, head of the colleges' admissions committee, was this week hopeful the Dover reforms would be accepted. "It has emerged quite clearly that a substantial majority are in favour of most of them," he said.

Paisley reprieve appeal refused

The new Scottish Office minister for industry and education, Mr Allan Stewart, has refused to reprieve Paisley college's social science degree, due to be axed in 1984.

The Scottish Education Dept says the future of the college's sister course in applied social studies has still to be considered as part of a "fundamental reassessment" of the subjects at Paisley.

Paisley's board of governors had asked the SED to suspend any decision on the degrees' future until a review had taken place, and three emergency meetings of the governors and Paisley's academic board were to place this week. The governors are likely to seek urgent talks with Mr Stewart.

The SED has, however, agreed to increase next session's joint intake to social studies and social science to 100. Mr Stewart has also revised the intake to college of education youth and community courses from the original recommendation of 120 to 150. But this has infuriated the colleges, who say the intake should be 190.

MPs call for Derry college

by David Jobbins

An autonomous polytechnic-style institution for Londonderry is recommended this week by the Commons Select Committee on Education, Science and the Arts.

The proposal, for a merger between Magee College and the North West College of Technology, runs counter to the Government's plan for Magee to be a part of the "polyversity" formed out of the New University of Ulster at Coleraine and Ulster Polytechnic.

The MPs' recommendation, put forward in their final report from the committee's 1982/83 parliamentary session, has reawakened the bitter controversies of the 1960s when the NUU went to a greenfield site at Coleraine rather than to the city.

Mr John Hume, the MP for Foyle, who was prominent in the "university for Derry" campaign of the 1960s, said the area would be best served by the city campus. And Mr Michael Cavanagh, chairman of the Derry Civic Committee, warned that to change course now would be to jeopardize progress made through the NUU/polytechnic merger.

"Such a change could only go ahead if for any reason the Government's merger was aborted, for example by the continued intransigence of the Coleraine authorities."

In their report, the MPs acknowledge that their proposal will not find favour with either the Government or the proposed merged institution.

Mr Nicholas Scott, Northern Ireland under secretary responsible for education, said when he set up a working party to review advanced further education in the Londonderry area that Magee was an "integral part" of the new institution.

The MPs welcome the initiative but added: "The needs of Londonderry and its hinterland cannot be satisfied through the carefully modulated relationships between Magee, the rest of the proposed university, and the North West College of Technology."

They see the new college at Londonderry establishing close links with the Council for National Academic Awards which with the disappearance of the polytechnic will otherwise largely lose its contacts with Northern Ireland.

And they also regard it as a base for future cross-border cooperation in line with a joint governmental study which in 1981 called for the greater use of post school education in the North by students from the South.

The vice chancellor designate of the proposed university, Mr Derek Birley, made clear his opposition to an autonomous institution in the city, but he promised the MPs that he wished to "re-interpret" Magee's approach to continuing education, while taking into account the needs of the community.

Further and Higher Education in Northern Ireland: second report from the Education, Science and Arts Committee, HMSO £5.55.



Edinburgh University senior president Imogen Foulkes with her executive, union president Tony Miles (left), treasurer Laurence O'Donnell and secretary Alan Little.

Meanwhile, back at the ranch

by Olga Wojtas
Scottish Correspondent

The scene was reminiscent of nothing so much as Dallas. There was a familiar tripartite of the screen, but in place of the egotistical Ewings, there were the secretaries of Edinburgh University, the principal, and Liberal leader David Steel, the university rector.

"The Triple Alliance" episode three of *Comings*, a six part BBC Scotland series beginning next Thursday on BBC 1 at 10.15pm, examining university life through Edinburgh, "the first university in the world to allow television free reign on its campus", according to series producer David Martin. He sees the programmes as the natural successors of the *Public School* and *Kingswood* series.

A press preview this week showed a brief compilation of the episodes which cover freshers' week, medical education, university government, the students' association professional staff and graduation day.

Twenty minutes is not long enough to judge a three hour series, and *Comings*

may bear out principal Dr John Burnett's hope that: "It will be a record of how one university tried to live up to its ideals towards the end of the twentieth century."

Some scenes may well fuel popular myths about student life, particularly one of yards of ale being consumed beside a strategically placed bucket. A later scene shows students complaining about their lack of funds: "I've got £2.50 of my grant left to last me till the end of term." The next shot is a sumptuous candlelit dinner party, with a cry from one elegant youth: Has Giles got the pheasant yet?

The "Triple Alliance" episode on July 28 may prove something of an anti-climax at the university. The BBC prefaces reads: "The university has decided that the day nursery is a luxury it can no longer afford. All the decisive Council meeting, the rector holds the balance."

But the issue has not yet been resolved, and exactly 10 days before hand, the campus unions will be lobbying the court to keep the nursery open.

SSRC seeks unit transfers

The Social Science Research Council is to hold exploratory talks on the future of its four specialist research units with the universities where they are based.

Mr Michael Posner, the SSRC chairman, has written to the universities of Aston, Cambridge, Oxford, and Warwick, seeking talks aimed at persuading them to take over the administrative costs for the units.

The SSRC, which has seen its budget cut in real terms by almost 30 per cent since 1979, is looking for ways to cut down on central administration costs, which in 1982/83 accounted for 11.4 per cent of its £20.9m budget.

The units in ethical relations at Aston, population studies at Cambridge, socio-legal studies at Oxford, and industrial relations at Warwick, have each faced cuts on average of 18 per cent in recent years, and been asked to find more money from external sources.

The future of the units, which are reviewed every five years, is not under threat. But it has been plain for some time that the SSRC is moving away from the concept of units towards more flexible designated research units where staff remain university employees.

The units, born in 1970, have been uneasy hybrids caught between the university world and the Civil Service. Conditions of pay, tenure, and pensions rights will be key issues in the talks with the four universities.

If agreements are reached the SSRC is likely to continue to pay and direct the unit's research with universities looking after staffing and administration. If not the SSRC may decide to put the units out to tender to universities willing to pay. The ethnic relations unit was moved from Bristol to Aston in 1980.

AUT bid to stop cuts at Aston

An attempt was being made this week to stop Aston University senate calling on council to consider making compulsory redundancies.

Senate, meeting after being adjourned last week, was due to consider an executive motion calling for the council to act in those departments which exceeded the minimum staffing range. But another motion said the university should reject the policy of involuntary severance.

Meanwhile, the Association of University Teachers headquarters has called on all its members to write to write to Aston council members protesting. Mr Steve Ruhemann, the AUT president has also written to all senators. "The AUT would not accept such a decision without protest and the resulting future would hardly rebound to the credit of the university," he said.

The next council meeting is on July 12. Next week the High Court will hear a plea from the AUT that the university cannot dismiss staff except for good cause, because of the tenure enshrined in its statutes.

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Each report is 128 pages long, 100p. Order from: The British Library, 96 Colindale Avenue, London NW9 5QB. Tel: 0181 4133000. Fax: 0181 4133001.

Controversy as art college rector resigns

by Paul Flather

The Royal College of Art has been plunged into fresh controversy by the announcement that Dr Lionel March, the rector, is to resign his post two years before his five year term is up.

A terse statement from the college, widely regarded as one of Europe's premier art and design schools, said that Dr March had decided to leave for "personal reasons" just two years after being appointed in the midst of great controversy. He will leave the college in September next year.

Dr March is declining to give any further statements until he has explained his decision to a meeting of the college council next week. But it is understood that he had become tired of the continuous college infighting and

the difficulty in imposing new reforms. Three recent events combined to make his position as head of the 146-year-old college even more difficult. An early retirement plan involving a number of professors was abandoned; plans to launch a multi-million pound appeal have so far borne little fruit; and the senate has failed to ratify the appointment of Mr George Slaney, a personal choice by Dr March, as dean.

Dr March, an architect and design specialist from the Open University, took over as rector in 1981 promising to reform the administrative structure of the college, and promote a greater design consciousness throughout the college.

His appointment came shortly after a major row when the college was accused by an official visitors' committee of being in breach of its charter for

not considering enough the needs of British industry in fostering the promotion of design. Dr Rhodes Boyson, then under-secretary for higher education, took the unprecedented step of sending the report to the college, and warned the college council that its recurrent grant might be reduced if the college did not make appropriate reforms.

The ensuing row over which way the college should proceed and how much attention should be paid to pressure from the Department of Education and Science, which has direct responsibility for the college, led to the resignation of five council members, including the chairman Mr Cob Stenham, a financial director at Unilever.

The board of visitors has been continuing with regular visits to the college this year, and a full report, the first since the critical 1980 report, has

just been sent to the Secretary of State for Education, Sir Keith Joseph.

Mr Robert Feilden, the chairman, said he personally regretted Dr March's resignation. "A great deal of progress has been made. It is a question of producing gradual and planned change. But Dr March has been up against various entrenched attitudes which want to maintain the status quo."

Dr March's attempts to impose severe economies have met with resistance, although 11 of the 40 full and 130 part time lecturers have not had their contracts renewed.

There are fears that the DES could now again use its powers as paymaster to force through reforms of which it approves. Mr Paul Convery, a senior student officer, said he was pessimistic. "I do not feel the college has many more climes to put matters right."

'Vicious pruning must end'

by Olga Wojtas
Scottish Correspondent

A Scottish Education College principal has called for a reversal of the "vicious pruning" suffered by the colleges of education over the past seven years. Mr Peter McNaught, principal of Craigie College of Education, said a diploma speech that there should be a financing system which was "subordinate to a proper consideration of the tasks, responsibilities, advice and support which people have a right to expect from the colleges".

The number of colleges had been cut from ten to seven, the teaching strength of the remaining colleges reduced by almost half and further recruitment of staff prevented, he said. This had brought about stagnation which had to be reversed, since commitment to the needs of the teaching profession was a vital condition of the country's overall economic revival.

The colleges needed a constant flow of new ability and experience as fresh subjects were added to the curriculum and credible practitioners of these subjects were required to lend the way, Mr McNaught said.

There comes a time as with any bank account where if nothing new is added, the capital is slowly used up, the interest diminishes and will one day vanish," he added.

Mr Gordon Kirk, principal of Moray House College of Education, predicted in a graduation address that there would be a major transformation in the relationship between education colleges and the professions they served.

The professions would be much more involved in initial training and professional bodies such as the General Teaching Council for Scotland, the Central Council for Education and Training in Social Work and the Scottish Community Education Council would validate courses "with increasing rigour and stringency," he said.

Courses would be developed through detailed and extensive discussions between the colleges and practising professionals, Mr Kirk added.

"I expect the various professional bodies in the years ahead to be quite as explicit in their requirements for continuing professional education as they currently are with regard to initial training," said Mr Kirk. He added that the colleges would have to accommodate more part-time courses as a result.

More part-time courses for mature students and open access to educational institutions were advocated by Social Democratic Party president Mrs Shirley Williams, while speaking at a graduation ceremony at Dunfermline College of Education.

He will make an unrestricted gift of £1.3m in the next year, with a further £2m to follow conditional on the progress of the centre, which will be named Templeton College.

The Oxford centre, founded in 1965, is responsible for virtually all management teaching at Oxford University. It offers PhDs, M Phils and M Litts, in management and two undergraduate degrees in engineering, economics and management, and metallurgy, economics and management. A new MSc starts in October.

About 25 undergraduates a year take degrees, most going on to work with local authorities or in the health service. There are 31 fellows and associate fellows, and about a fifth of the centre's £971,000 budget came from the university.

The main work of the centre is providing courses for middle senior managers from government departments and industry, which Mr Uwe Kitzinger, the director, describes as a sign of Oxford's growing commitment to continuing education.

"Oxford was very slow to start in management studies," he said. "The Franks committee did not pick Oxford as a site for a business school. But the UGC has not abandoned student target numbers and it will also reopen the question at its September annual conference."

The announcement of the gift coincides with the creation of the first Oxford tutorial fellowship incorporating management based at Balliol, and backed by a donation of more than £100,000 from the Foundation for Management Education and Mr Clive Richards of N.M. Rothschild and Sons. A research fellow was appointed in the 1960s.

Mr Bill Weinstein, newly created fellow in politics, public policy and management, said he thought management studies were set to expand inside Oxford as the practical importance of the subject became more widely understood.

"I think there will be a growth in the subject but not at the expense of other subjects. I will be bringing contacts from the real world of business at the centre back to Balliol when I return to teach politics."

The centre meanwhile is considering ways of strengthening its status and links inside the university. Mr Kitzinger feels other disciplines could gain from the model of the centre to generate finance and teach undergraduate and mature students.



Benefactor: John M. Templeton

£3m gift for Oxford centre

by Paul Flather

Management studies are set to increase their influence in the sancta of more traditional scholarship in Oxford following the creation of the first tutorial fellowship involving management, and a £3,260,000 gift to the Oxford Centre for Management Studies.

The gift is from Mr John M. Templeton, an investment trust millionaire living in the Bahamas, and a Rhodes scholar at Balliol College in the 1930s. It is said to be one of the largest gifts to a British educational institution.

Mr Templeton, aged 70, who also founded the Templeton prize for religious progress recently awarded to Alexander Solzhenitsyn the Soviet author, has given the money to help revitalize British economic management and to provide "continuing education" to those who exercise social leadership.

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Chemistry transfer proposal scotched

Ngaio Crequer

A University of London working party on chemistry has proposed that students in Chelsea College should transfer at the end of their first year to the Royal Holloway College at Egham in Surrey.

But Chelsea College senate has effectively scotched the recommendation by declaring that all students, subject to satisfactory progress, will be able to complete their studies at Chelsea or the new "Trinity" of King's, Queen Elizabeth College and Chelsea.

The joint planning committee working party on chemistry has proposed that the subject be reorganized on five sites: University College/Birkbeck; King's/OEC/Chelsea; Queen Mary College/Westfield; Royal Holloway/Bedford College; and Imperial College, which remains unchanged.

It says that as chemistry at Royal Holloway/Bedford needs reinforcement, three members of the Chelsea staff, plus resources, should be transferred in 1984. "Students entering the Chelsea department to read honours chemistry would transfer with these staff at the end of their first academic year and would complete their studies at Egham. The undergraduate intakes to Chelsea of 1982 and previous years would complete their courses as registered Chelsea students."

Because of the impending "Trinity" merger, it recommends that the remaining three Chelsea staff remain at the ultimate King's/OEC/Chelsea department, although for personal reasons two might go to QMC/Westfield.

The merger of chemistry courses at King's/OEC has already begun and the 1983 OEC entry will transfer to the Strand for their third year in 1984.

But at Chelsea, senate accepted nem on the motion from the student union president Mr Kam Poroshir blocking the movement of chemistry students mid-course. It will also affect geology students where a similar recommendation has been to move students.

Senate accepted the arguments that moving mid-course would be detrimental to the students and that those who had applied to Chelsea had wanted to be in central London, not Egham.

Of the other recommendations the working party notes that UC and Birkbeck could pool research facilities although teaching would still be separate. The cost of association, including furnishing and equipment would be £300,000.

There should be complete merger of chemistry at EMC/Westfield by 1984, when the remaining third year students at Westfield will move over. At RHC Bedford chemistry has been wholly integrated since 1982 and all activities are proceeding as one department.

adding the money to the recurrent grants of Glasgow, Strathclyde and Edinburgh universities which will continue to run the centre.

The other universities will still have access to the centre on a contract basis. Sir Alwyn Williams, principal of Glasgow University which contributes most to the centre, said he was delighted by the UGC's decision which ensures that nuclear technology would survive as an academic subject in Scotland.

The centre, established 20 years ago, is prominent in the development and application of radioactive isotopes in engineering biology, medicine and geology.

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Shadow education spokesman Mr Neil Kinnoch (right) manages a smile, despite having heard it all before... Mr Kinnoch was to give the John P Mackintosh memorial lecture in Prestonpans, East Lothian, but because of his throat complaint, it was read for him by fellow Labour MP Mr Robin Cook, manager of Mr Kinnoch's campaign for the Labour leadership.

The memorial lecture was set up in 1980 with funds from Edinburgh University and East Lothian, where John Mackintosh, a former professor of politics at the university, held his seat until his death in 1978. This year's lecture was organized by Dr Henry Drucker (centre) of the university's politics department.

Poly students fight house demolition

Councillors from two east London boroughs will today reconsider proposals to demolish houses which North-East London Polytechnic students feel could be used as temporary student accommodation.

The houses are near the polytechnic's Stratford Green site and will make way for grassy areas and car parks pending Department of Education and Science approval for new building plans.

Mr Vaughan West, the NELP student union's research and welfare officer, said: "This will not only deprive students of housing but will also involve Newham council in unnecessary costs."

"The union, while not against developing the polytechnic, is appalled that Newham is now in the business of demolishing houses which could be used as student residential units, before they have approval and funding for the college building programme."

The students have told the joint education committee representing the NELP's boroughs of Newham and Barking, that they believe Greater London Council funding is available to refurbish the properties for student accommodation and that a local housing cooperative is interested in managing them.

The final decision rests with Newham, whose policy and resources committee was also meeting this week. But the decision by governors last week to refer the row to the joint education committee once more has given the students confidence that they are getting their case across.

The committee is also to consider the possibility of a housing association managing the polytechnic's Temple Mills residential site where the students say rents for one bedroom have reached £24 a week - half the full student award which many students do not get.

Students argue this is £10 a week higher than for comparable accommodation run by housing associations for students in the area.

According to the union, there are more than 70 vacancies at Temple Mills, because of the high cost and cheaper alternatives.

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Business courses announced

The Open Business School launched by the Open University has announced the first two of its courses for managers which will start in October.

The business school, which was launched officially last week, is the outcome of OU research into managers' needs which was backed by the Manpower Services Commission and the British Overseas Trade Board.

The school plans to run more than twenty short courses eventually starting with two courses in effective management and personnel selection and interviewing. Participants in the effective management course can choose between a six-month course starting in October or a more concentrated three month course starting later.

No formal qualifications will be necessary but most students will probably come from a management background. The students are likely to include technologists who are new to management, people who have become redundant and new managers waiting to acquire management skills quickly.

The syllabuses reflect the everyday problems which the students will be presented with in their work. In the effective management course which will require five hours of work a week the syllabus will cover setting objectives, decision-making, budgetary control and communication.

Both the autumn courses will run two-day residential schools and there will be some tutorial work.

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THE TIMES SUPPLEMENTS REPRINT SERVICE Robbins to Leverhulme

The Leverhulme programme of study into the future of higher education was organised by the Society for Research into Higher Education with a grant from the Leverhulme Trust and further grants were made by the Gulbenkian Foundation and the Department of Education and Science. The programme consisted of eight seminars the first in April 1981 and the last in September 1982.

An edited four-page version of the final report is now available in reprint form (first published in the Times Higher Education Supplement on 27th May, 198

Overseas news

Salaries outpace inflation

from E. Patrick McQuaid

WASHINGTON
Average salaries for American college teaching staff outpaced the rate of inflation for the first time in a decade, according to the American Association of University Professors' annual survey.

The AAUP is one of the nation's largest collective bargaining agencies. It says that salaries nationally rose 6.4 per cent during the 1982/83 academic year, translating into a 2 per cent real increase when coupled with the inflation rate. During the previous decade salaries fell by over 20 per cent, with inflation worked into the formula.

An average university professor is paid \$31,011 (£20,670), while professors at institutions awarding a bachelor's as the highest degree are averaging \$22,890 (£15,260), according to the salary survey.

The average salary at a private institution was \$28,680 (£19,120) and \$27,860 (£18,570) at public schools. The AAUP noted a "widening discrepancy" between the percentage increases at private and public institutions. In the private sector, earnings increased by 8.3 per cent while teachers in the public sector gained only 5.9 per cent. Church-affiliated institutions recorded salary increases of 7 per cent.

The AAUP officers said the increases were a much-welcomed development but could be a one-time occurrence, "nothing more than a hiccup on the proverbial roller coaster".

The report is based on a survey of 2,800 institutions and the federal government's National Centre for Education statistics.

Salaries actually dropped from the previous year but spending power increased because of a drop in the inflation rate and relative stability in the consumer price index.

Most salary increases were awarded to junior teaching staff, indicating a trend among institutions across the board to retain younger staff, the agency report speculated.

College of technology closed down

from Hasan Akhtar

ISLAMABAD
Amid growing student unrest and chaotic educational administration in Pakistan, the government is believed to have decided to close down the Rawalpindi Government College of Technology.

The scene of recurring students' troubles, it is situated on Rawalpindi's highway which connects the federal capital with the north-west frontier province.

The college of technology has about 2,000 students and was set up about 15 years ago, first as a polytechnic school. Since then it has developed a strong political character, mainly because the students come generally from lower middle-income groups suffering from social and economic problems.

The first incident to bring the institution into the political limelight was the death of a student demonstrator during police firing in 1968. This led to a violent countrywide agitation spearheaded by the late Mr Z. A. Bhutto, the chairman of the Pakistan Peoples Party, which ended the following year with the downfall of the late president, Ayub Khan, after 11 years in power.

Since then students have often hurraed the highway in order to press their demands, disrupting traffic to the north-west party of the country, which has been a sensitive area since the Soviet military intervention in Afghanistan in 1979. The latest unrest took place in January this year when the police clashed with the demonstrators and arrested 33 students. They were later sentenced by a military court to up to three years in prison and 10 lashes. Some 27 of them were freed only the other day after completing only part of their sentences.

Australia clamps down on foreigners

from Geoff Maslen

MELBOURNE

The number of foreign students entering Australia next year will be frozen as the first step in a reorganization of its overseas student aid programme.

The federal minister for education and youth affairs, Senator Susan Ryan, said that while present numbers would be maintained this year, a massive inflow of overseas students next year would not be permitted.

Senator Ryan said that because of the planning needs of higher education, there was pressure to make short-term decisions. But by the end of the year the government planned to announce a complete revamping of the overseas student aid programme.

"Up until now we have been providing free and easy access to tertiary and secondary education for overseas stu-

dents. When things were good that was all right," she said. "Now that we have shortage of places in higher education and we want greater participation by young Australians in tertiary institutions, we have to reconsider our overseas student aid programmes."

Senator Ryan said it would be necessary to reconsider the implications of allowing overseas students to complete their secondary education in Australia and then go on automatically if they were eligible to tertiary institutions.

"Simply because of the pressure of places in tertiary education by our own students we have to restrict numbers for overseas students," she said.

Australia's largest university, the University of New South Wales, is scheduled to make its own decision about how many overseas students it will let into its courses next year. A

confidential report completed for the university council earlier this year showed that the unrestricted entry of foreign students had meant that an increasing number of good, qualified Australian students were being displaced.

An inter-departmental committee report on the numbers of overseas students studying in Australian high schools, universities and colleges of advanced education together with policy alternatives has been submitted to the foreign minister, Mr Hayden, the education, Senator Ryan, and the immigration minister, Mr West. They have yet to complete discussions on the inter-departmental report.

Senator Ryan said several alternative methods were being studied to ensure that the entry of overseas students to Australia was more equitable. She said a means test might be

introduced which would see the wealthy students paying the full cost of their education.

A scholarship system was also an alternative to help the children of the poor to come to Australia. But Senator Ryan admitted that there would be problems in introducing any new system of aid to overseas students.

The Australian Union of Students condemned Senator Ryan's statement claiming that any restrictions on the entry of overseas students would be contrary to Labor Party policy to expand tertiary enrolments.

The union is concerned about the lack of consultation on the issue and has objected to the presumption in the minister's announcement that all foreign students come from wealthy families. Most overseas students found it difficult to pay their annual visa charges, a union official said.

Judge overturns unpopular draft registration penalty

from Janet Hook

WASHINGTON

A federal judge in St Paul, Minnesota has overturned a new law which prevented young men who failed to register with the military selective service system from receiving student grants and loans from the federal government.

The issue has caused widespread controversy among colleges and students, and is now expected to be taken to the United States supreme court.

Judge Donald D. Alsop of the US district court for Minnesota has issued a permanent injunction barring the department of education from enforcing the law linking eligibility for federal financial aid to students' draft registration status.

The justice department plans to take an appeal on the ruling to the supreme court. Government lawyers may also ask the court to block Judge Alsop's injunction until it delivers the final verdict on the constitutionality of the law.

Because the supreme court is scheduled to begin its summer recess in early July, the legal battle is not likely to be resolved until well after the court reconvenes in October.

The controversy involves a law that would require young men to certify that they had registered with the Selective Service System when they applied for federal grants and loans to help pay their college expenses.

The law was approved overwhelmingly by congress last summer in an effort to encourage young men to comply with the federal requirement that they register for the draft at 18.

The link between draft registration and student aid had been scheduled to

take effect today. But six students challenged the law in the Minnesota court and Judge Alsop issued his order in March which temporarily barred enforcement of the requirement until he settled the legal questions.

Judge Alsop has now made that order permanent, saying that the law unconstitutionally forces students to provide potentially incriminating evidence against themselves, by requiring them to provide the government with information about their draft-registration status when they apply for federal aid.

The judge also concluded that the law was unconstitutional because it imposed punishment on students for failing to register for the draft without giving them the benefit of a court trial.

Judge Alsop ordered the department of education to inform college financial aid officials of his ruling by June 30. Campus officials would be responsible for posting notices letting students know that they need not provide information about their registration status to receive federal aid.

Judge Alsop also ordered the department and colleges to eliminate references to the draft registration requirement from all student-aid application forms.

Because the processing of student-aid applications takes several months, the education department and many colleges began laying plans for enforcing the registration requirement early this year. They printed student-aid forms that included questions about students' draft-registration status and which would be deleted.

Members of Congress who opposed the law linking draft registration and student-aid eligibility were elated by Judge Alsop's ruling.

Fighting for peace by limited degrees

Legislation to create a US Academy of Peace, which would offer graduate and postgraduate training in conflict resolution, has been amended to deny the proposed institution the right to grant academic degrees.

The measure, inserted by a Senate committee, is an attempt to gain support for the academy from the American Council on Education which fears such an institution would compete with existing colleges and universities, diplomacy and military schools.

While a final vote on the academy has been delayed, the Senate committee defeated another amendment that would have created programmes for peace research and education but without establishing a separate academy. The White House favours that scheme, which would put the programmes under the charge of the Arms Control and Disarmament Agency.

The legislation would provide \$31m to start the academy - \$15m to purchase a site, \$6m for maintenance dur-

House gets new leash of life

Students may find themselves in the dog-house at Carl Albert College, Portneau, south-east Oklahoma.

Accommodation is in short supply in this small town where college administrators are going to convert a dormitory for eight women into a kennel which was the home of the favourite dog of US Senator Robert S. Kerr, a rich oilman.

"It was a very large dog," explained Joe White, the college dean. "We have decided to name it Kennel Hall."

The remodelled doghouse will have eight beds, two bathrooms and a front porch. The renovation will cost \$10,000 (£6,600).

The college has yet to say whether the residents will be allowed to keep dogs.

Temperatures rise over medical quota

from John Walshe

DUBLIN

The Irish education minister, Mr Gemma Hussey, has sent a frosty letter through the country's five medical schools after entering the debate about the alleged over-production of doctors.

The minister has promised to do her utmost to ensure that no more than 30 Irish students will be admitted in the forthcoming session. The figure was agreed some years ago but has not yet been reached.

Mrs Hussey was speaking at a meeting of the Irish Medical Association's women's group, which has been urging a restricted intake of 200 Irish medical students.

However, she went on to refer to the latest pressures to reduce numbers further below 305. She announced that the health ministry was undertaking its own survey of medical needs while the Higher Education Authority was also looking into aspects of medical staffing.

Mrs Hussey agreed that if the entry were further reduced this would bring an end to the sharp focus. Why does a small country like Ireland need five medical schools?

Four are attached to university colleges while the fifth is run by the Royal College of Surgeons in Ireland, which gets very little state aid.

The minister acknowledged that the first consequences of a cut in student numbers would be an increase in unit costs. Income from fees would be reduced while job levels could not be cut because of the contractual rights of staff members and the number of specialists.

An alternative approach would be to increase the fees for the medical faculty to cover the loss of revenue, she said. Consideration might also be given to the question of offering spare places at the full economic fee—including the large number of overseas students who apply for places in Irish medical schools.

Mrs Hussey's contribution to the debate was welcomed by the Irish Medical Association, which says the profession is in danger of becoming overcrowded. Although there are few totally unemployed Irish doctors, the association fears the situation in the health service at home and fewer openings in countries like Canada, the United States and Britain.

The network faces a congressional investigation regarding its fiscal management. National Public Radio was founded in 1970 as a non-profit-making organization to provide programming to its member stations nationwide.

As exhaustion and the summer vacation settle over French higher education the major issues of reform are temporarily in abeyance. With the end of year examinations have come the usual crop of scandals and last minute threats.

In the CAPES examination (Certificat d'Aptitude Pédagogique à l'Enseignement Secondaire) 30 candidates have appealed to the Conseil d'Etat - France's highest administrative court. The CAPES is a competitive examination for graduates for a teaching post in secondary education. This year

some 5,000 candidates will battle for around 1,234 places.

The candidates want the French examination to be annulled on the grounds that typographical errors have slipped into the examination papers.

Among other incidents have been the theft of exam papers and administrative errors in calling candidates for examinations, while the baccalauréat - the school leaving certificate - has been beset by similar contretemps.

In the academic regions of Blois and Orléans the philosophy paper was withdrawn following the leakage of questions prior to the examination. Lecturers in certain universities in

Cash crisis threatens network

from E. Patrick McQuaid

WASHINGTON

The network representing 281 educational radio stations throughout the United States will have to struggle to stay afloat, according to its auditors.

Educational broadcasting in America does not receive commercial sponsorship and relies on listener contributions, corporate gifts, and federal grants for its maintenance. About half of the stations are affiliated with colleges or universities and thus benefit from state and local subsidies.

Following the release of an audit showing that National Public Radio (NPR) had incurred a net loss of \$4.5m - with liabilities exceeding assets by another \$6.5m - for the first seven months of this fiscal year, the director sacked its chairman and accepted the resignation of its financial manager.

Mr Myron Jones had chaired the NPR board since last October and refused to quit voluntarily. At a recent board meeting he received only one vote of confidence from 13 attending members. After losing the chairmanship he resigned from the board.

Criticism weighed heavily against NPR's chief fiscal officer, Mr Arthur Roberts, after it was learned that the network had neglected to pay \$651,172 in state and federal taxes. His resignation and the departure of Mr Jones are the latest episodes in a vicious management purge.

According to the audit, the money NPR had failed to pay in taxes was being used to floss day-to-day operations. At a Washington press conference, prior to his removal, Mr Jones explained that the tax payments were being deferred "as a holding action until other things began to work." In retrospect, however, he said "it was not a good decision."

The financial crunch has seen 131 staff dismissals since March, when network officials first admitted in the crisis. NPR management then predicted a \$2.8m deficit in its \$26.6m budget for this year. By April the predicted deficit had risen to \$5.8m and some staff speculate that by the close of the fiscal year (September 30) the figure could hit \$12m.

In the wake of these revelations the corporation's president, Mr Frank Markiewicz, tendered his resignation in April. He was chief executive officer of NPR since 1977 and was replaced by Mr Ronald Bornstein, who now serves as acting president.

Poor management practices coupled with overly optimistic hopes of severing all government ties by 1987 are cited by the auditors as the foundation for NPR's financial woes. Some \$800,000 was spent out of the budget's travel and entertainment account during the seven-month audit period and credit card use was not properly checked, according to the report. The corporation failed to make "timely and accurate reports" of its financial dealings and failed to itemize expenses from those accounts.

In addition to Mr Markiewicz, the executive vice-president Mr Thomas Warnack, and Ms Barbara Cohen, director of the news division, also resigned.

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In the academic regions of Blois and Orléans the philosophy paper was withdrawn following the leakage of questions prior to the examination. Lecturers in certain universities in

the capital have threatened to withhold students' end of term assessments. Those principally concerned are in the fields of law, political science and economics.

The purpose behind this blackmail is to put pressure on the government to do away with the competitive examination - the aggregation - that can lead to accelerated promotion to a full professorship.

The aggregation in these areas is sat by those already holding the *doctorat d'Etat*. Protestors claim the aggregation is unfair and does not take into account such criteria as publications record and teaching ability.

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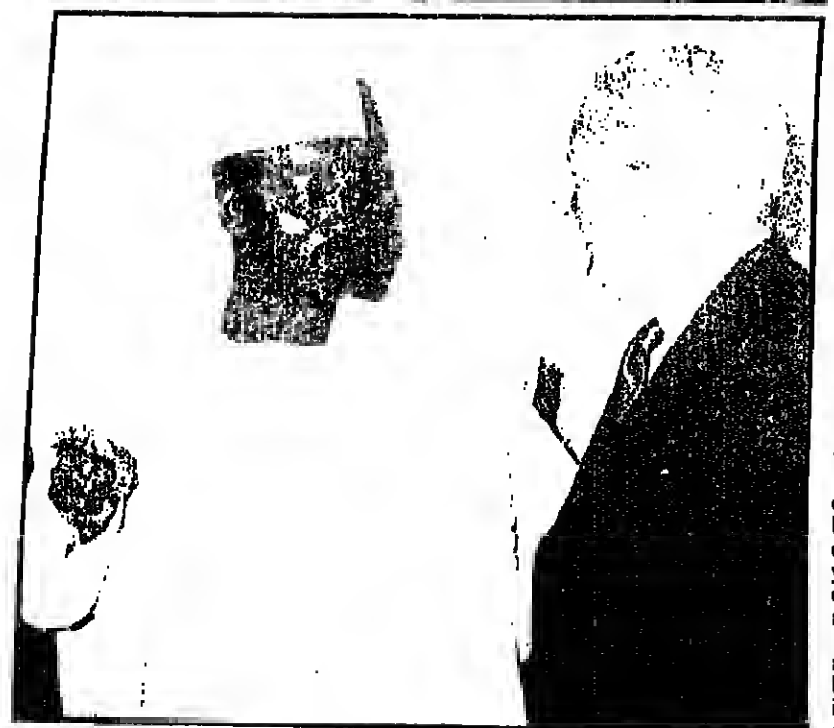
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Narrowing the gap between North and South: (top left) Leopold Senghor, ex-president of Senegal; (top right) President Julius Nyerere of Tanzania; (bottom) General Gowon of Nigeria with former British prime minister, Edward Heath, now a Brandt Commissioner.

How new is the new international economic order? If it is indeed to be really new and innovative, can it be achieved without fundamental political change in the northern hemisphere? Without the ideological radicalization of the Organization of Petroleum Exporting Countries? Without wider fundamental economic changes in the southern hemisphere as a whole? Without the creation of a new international technological order?

It is very unlikely that the western world would get drastically radicalized and socialized this side of the year 2000. Such radicalization would be one route towards a genuinely transformed world economy.

A more realistic alternative is to pray for one monumental coincidence – the coincidence of major western democracies voting their left-wing parties into power at approximately the same time.

France has moved to the left at precisely the time when Britain and the United States are under the (consolidated) control of the right. The new order would stand a better chance if Tony Benn, Michael Foot or his successor were in power in Britain, Mitterrand in France, Teddy Kennedy in the United States, and the equivalent of Willie Brandt in the Federal Republic of Germany.

There are alternative political changes in the North which would help the order's cause. One would be changes in the balance of domestic lobbies in the North below the governmental level.

For example, an increased importance of the black lobby in the United States could be a major asset to the Third World. Black America is the most important enclave of people of the Third World extraction lodged in the northern hemisphere. There are twice as many black Americans as there are Jews in the whole world. If black Americans became half as influential in shaping American policy towards the Third World as American Jews are in shaping American policy towards the Middle East, the North-South equation could indeed be transformed.

In the absence of either a monumental electoral coincidence which makes the western governments

extra liberal at the same time, or the coincidence of such new powerful lobbies as potential black leverage on the American congress, and Third World has to postulate transformation within itself. The ideological radicalization of the OPEC could create greater OPEC readiness to put pressure on the industrialized world to make concessions to the South.

Some people argue that the North would only agree to make concessions when northern economies are internalized. In reality the North would only make concessions when northern economies are externally vulnerable. A radicalized OPEC – including the radicalization of Saudi Arabia – would help to make the North recognize its vulnerability.

But over and above issues of ideology and electoral successes are the more fundamental issues of comparative technological development. The international class structure is not really based on rich and poor; it is based on developed and underdeveloped. The new international stratification is based less on who owns what than on who knows what. Kuwait is richer than France in terms of per capita income, but less developed than France.

And so the real economic transformation of a Third World country is not to be sought in the income derived from such resources as oil; it is to be sought in hard technological skills. One factor to bear in mind is that in parts of Africa primordial or ancient technology coexists with advanced modern technology. Prehistoric rudimentary skills coexist with the emergence of highly trained modern scientific know-how. A look at Africa can in fact captivate the entire span of the history of technology.

Historians of the evolution of technology have sometimes traced a progression from hunting and gathering, to hoe agriculture and then onwards to plough agriculture. Hoe agriculture is sometimes combined with keeping cattle. Hunting societies and societies which are cattle keepers, tend to have a way of life where the male is economically dominant. Killing wild animals and controlling large numbers of domestic animals is the kind of work which gives the man in the family a

A new university-based colonialism? Stephen Chan

Leading thy neighbour

The question of aid to Third World countries is complex. It has always been agreed that aid should be temporary. Recommendations for an increase in aid flows, such as those made by the Brandt Commission, recognize the exceptional difficulties of development at the present time. But Brandt argues for the reform of the international economic order as the long-term solution to development difficulties, not an increase in aid alone.

Aid, as it is currently disbursed, is also an uneven affair. With the exception of five Arab countries, who give aid mainly to other Arab states, Scandinavian countries and the Netherlands, the nations of the world do not reach the UN target of 0.7 per cent of Gross National Product for development assistance.

In the budgets of donor countries, therefore, aid is a marginal carry. But it is also marginal in the budgets of most recipient countries, averaging about 2 per cent of GNP.

There are glaring exceptions to this rule. Co-tries in clear distress, such as Tanzania, depend upon aid for 12.7 per cent of GNP. Egypt receives aid equivalent to 15.2 per cent of GNP, and Israel 8.5 per cent of GNP – these two countries benefiting from US political concerns, since 40 per cent of all US bilateral aid is channelled to them. But, overall, as the Brandt Commission rightly recognized, the question of aid is considerably less vexed than that of international economic structures.

It is certainly true that much aid has been poorly disbursed and poorly utilized. The case against aid is, in fact, a strong one, but not overwhelming. On the negative side of the question is the fact that much bilateral aid is tied to the subsequent purchase of equipment, spares, and expertise from the donor country.

Aid is thus used as a marketing device, to the ultimate benefit of the donor, and at the cost, to the recipient, of market mobility in the case of purchases and future programme development in the sector in which tied-aid was received.

Further, the mechanics of giving untied aid becomes essentially a financial operation in itself. Deadlines must be met, and funds must flow out, sometimes willy-nilly, to ensure that the donor agency will, in the next financial year, have funds flowing in. Disbursal is judged by its efficiency, not its effectiveness, and this has led to appalling project sponsorships.

Finally, the lingering concept of aid as a charitable activity, with images of grossly deprived people who must be assisted out of Christian compassion, tends often to install an aid-orthodoxy which presupposes that the ways of reaching the poor are culturally identical to those used in the donor countries. For these and other reasons, aid is in a mess; hopefully, informed debate will lead to the overhaul of bad systems of aid disbursal, but not to the

reduction or abolition of aid.

Certainly aid has helped to build many schools, colleges and universities; it has helped to train staff for these institutions. At university level it has engendered a genuine international cooperation and consultation. The case of the Association of Commonwealth Universities standing out. And, by a process of external examining, which often grew out of the manner in which a university was founded, it has maintained a uniformity, or recognized order, of standards.

The question of standards is, of course, central to the consideration of aid and higher education. Because standards have most frequently been assessed in relation to recognized curricula. Thus, a chemistry course in Khartoum may, in fact, closely resemble one in London – whether or not that sort of course is directly related to the immediate scientific needs of the Sudan.

Why, therefore, continue underwriting this sort of thing? Why contribute to laboratory equipment? Why give graduate fellowships to future chemistry professors? Why, in short, fuel a process which leads seemingly nowhere?

There are four major reasons why such questions cannot lead to a simple answer. The questions themselves, when examined, arise from complex assumptions and needs.

For instance, since the rising of fees for overseas students in the UK, universities have actively advanced the case of overseas intake as important to them financially; and that, while overseas students can pay much to the universities, the government should not raise the threshold to the point where student numbers start falling away.

So the arguments in favour of overseas students have a financial flavour, rather than a pedagogic one. Courses in chemistry are not to be revised for their sake, or the sake of their national needs, but their presence in class, duly paid, is welcome none the less – an inverted and perhaps perverse version of tied-aid.

Foreign governments continue to be most anxious for their students to study in the UK. The question of student fees led to some minor but definite strains in Commonwealth relations. Governments were concerned about missing out on the established quality of British education, not the applicability of its content.

In this sort of atmosphere, a return to first principles – what the education is for – is difficult. Higher education becomes another agenda item in international negotiations, and another item in national lobbying exercises. The politics of the matter obscure its heart. Apart from political questions, four groups of considerations arise.

The development of Third World universities reflected metropolitan influence. In Commonwealth nations, the external system of London University was widely used. This was a matter of colonial policy, based on fiscal prudence as much as academic value, but it set the tone for

Ali A. Mazrui looks at Africa's role in the search

Ploughing fresh furrows

central economic role. But with the coming of the hoe and settled agriculture the primacy of the male in the economy could no longer be taken for granted. On the contrary many hoe societies have been known to develop a central economic role for the women. Wives take to the ahambas and become quite often economically more important than their husbands.

But with the coming of the plough, pulled by an animal, men in the history of Europe and Asia became once again the main providers of food. The control of the animal pulled the plough was deemed to be a man's job – more so than the use of the hoe to cultivate a little plot of land. This itself had a variety of other social and cultural consequences. In the Middle East patrilinealism began to reassert itself among the ploughing peoples. Even religion began to respond to these changes. Male deities and male priests, characterizing the new social organization of the Fertile Crescent, may also have been connected with the new masculine role in agriculture.

In part of East Africa the stabilization of the ox-plough as the central aspect of agriculture could also effect such social arrangements as the division of labour between men and women in the economy. Labour migration in East Africa, with men going to the towns and mines while women tend the farms, could be significantly modified if not arrested. If the man is now needed at home to control the ox that pulls the plough, and it is no longer easy to leave domestic agriculture in the rural areas to women alone, an extra incentive will have come into being to keep the African male tied to his soil – and thus discourage the male drift to the cities and the mines. The men would thus be kept busy in the rural areas, tending the oxen and sharpening the plough blades.

President Julius Nyerere of Tanzania did grasp fairly early that even a move from the hoe to the plough could

be a major technological change. Indeed, although Nyerere believes in an ideological revolution, he also believes in technological gradualism. In matters concerned with the relations between man and man, Nyerere is a revolutionist. But in matters concerned with relations between man and machines, Nyerere is a gradualist. He is in favour of rapid elimination of class divisions as a basis of relationship between man and man. But he is against pushing technological change so fast that village life is prematurely disrupted, and dependence on outside powers increased. Rapid mechanization and industrialization increases dependence on technologically more advanced countries. But a slower pace of technological change could both preserve village life from premature bewilderment and contribute towards genuine self-reliance.

As Julius Nyerere said to his people: "Instead of aiming at large farms using tractors and other modern equipment and employing agricultural labourers we should be aiming at having ox-ploughs all over the country. The *jembe* (hoe) will have to be eliminated by the ox plough before the latter can be eliminated by the tractor. We cannot hope to eliminate the *jembe* by the tractor."

Nyerere emphasized other aspects of technological gradualism as a method of ensuring that the nation developed from its own roots, and preserved that which was valuable in its own tradition.

Uganda from time to time has also tried a new emphasis on rural development and agricultural training. The policy proclaimed in 1971 of introducing agriculture in as many schools in the country as possible was certainly in the direction of helping the nation to grow from its own roots and avoid too big a cleavage between those who worked on the farms and those who entered other areas of national endeavour. Until now education in Afri-

ca as a whole has been a process of deruralization – a method of severing the ties with rural life. The introduction of agricultural training in schools should help to reduce this role of education as a process of depopulating the countryside.

Nor must we forget the political implications of changes in military technology in East Africa. There are still parts of Africa where military skills are assessed in terms of prowess in handling spears and in the use of the bow and arrow. If our weapons were still spears and bows and arrows it would have been difficult to create a nation-state even on the relatively small size of Uganda. Building states requires the centralization of power and consolidation of authority and a monopolization of violence as far as possible. It has been well said that the bow and arrow is essentially a democratic weapon. As Dr Jack Goody, of the University of Cambridge, said of this weapon: "every man knows how to construct one; the materials are readily available; the techniques uncomplicated; the missiles easy to replace (though more difficult with the introduction of iron that affected even hunting people like the Hadza of Tanzania and the Bushmen of the Kalahari). With the technologies of the bow and stone-tipped arrow every kind of centralization of power is almost impossible. But with the introduction of metals, kingdoms and states are on the cards."

With the coming of the rifle in colonial Africa, and the tank in independent Africa, there emerged specialization in military techniques. The old days of military democracy, when everyone passed through the warrior stage, and the weapons were the simple ones capable of being manufactured by the warrior himself, were now replaced by the era of military professional specialists, with weapons requiring high technological skill to manufacture and some specialized training to use. In

considers the educational implications of overseas aid

up the garden path

future university development.

Meanwhile, nationalistic leaders were receiving higher education in western countries and saw the absence of universities in their own lands as a further proof of colonial deprivation. At independence, universities began to be built, and were intended deliberately to reflect international standards – now that the nation itself was a full and ostensibly equal member of the international community.

Influential reports, such as that by Ashby on behalf of Nigerian university expansion, fuelled the desire to take a place on what Ashby called an international gold standard – on which a degree from Cambridge, Cornell, or an African university could be regarded equally.

The question of comparability remains a major one. Universities judge themselves on where they stand in the international rankings. It is, at least, a matter of national institutional pride, but it reflects also the continuing influence of established western academic standards, and their percolation down to the fledgling institutions of the Third World.

There is, besides, no other model for the new universities to emulate. All over the world, the matters of standards and degree quality are serious ones, and the treatment of institutions judged beyond the pale is enough to keep the latest entrants in the academic world firmly on the straight and narrow.

It is, in any case, a very risky business to blaze new ground, and to do so without incurring raised eyebrows or even outright disapproval. How, for instance, is a Third World university to establish a chemistry course that is relevant to national needs, and which still reaches international standards? Who is there, internationally, who can judge the standard of a curriculum that is peculiarly national, that has been purposely removed from the accepted international mould? And, if a national curriculum is adopted, and a standard agreed, who is there to train or retrain the professors so that they might first teach the new curriculum and second teach it to acceptable standards?

When the University of Papua New Guinea was established, the idea was to inaugurate a medical degree that was peculiarly tropical in its content. So much so that graduates were not expected to be able to register as doctors anywhere else, not even in other tropical countries – for the degree was strictly intended for Papua New Guinea consumption. Now, whether this innovation lasted or not, and I don't think it did, it was made possible in the first place only by considerable foreign aid. Australia has a fixed interest in Papua New Guinea, being the former colonial power, and gives 60 per cent of its bilateral aid to that country. There was no question of a self-help effort in the case of the medical faculty, nor was there the possibility of one. The expertise, support, standing, and

acceptability of pathfinding efforts are beyond the tenacity of most Third World universities.

Development, finally, is not a static venture. Tracer study after tracer study in Third World universities, on the placement of graduates and the current and future demand for more of the same, has been overturned by events.

When one considers the remarkable developments since independence of, say, African countries, in terms of educational, medical and administrative services, one considers that the rush for higher education has not been at all disproportionate to the needs of these countries. In Zambia, there were 99 graduates at the time of independence; now promotion in the civil service depends on graduation and, in some departments, so does entry.

With the public sector on its way to being staffed at a level one would consider desirable in a national enterprise, graduates and researchers must now be sought for an expanding private sector.

The first foundation of African universities usually stressed a balance among faculties. This often meant some were less immediately important than others, but the objective was the establishment of an identifiable university which contained a range of expertise. Without such first foundations, the move in countries such as Nigeria to specialized universities of technology could not have been comfortably made.

The question of aid for higher education in the Third World would certainly benefit from the same level of examination required by the question of aid in general. But this is not an area of snap judgments, particularly when in terms of the historical development of Third World universities this country played a very major role; particularly when in terms of the international acceptability degrees this country and other developed countries do so much to fix standards; particularly when the universities of developed countries do so little to help their developing colleagues to establish pathfinding curricula; and particularly given the essential lack of a foundation on which to judge what is developmentally rational and what is not.

In short, the higher education UK aids is the higher education UK helped develop and sustain, but which it does not and cannot change. Change will certainly come as the Third World universities themselves gain maturity and self-confidence, and may then be truly assisted if first world universities abandon their own insularity.

But it makes little sense to love one's neighbours by first leading them up a prescribed path and then, with a few gratuitous words of why they should now find their own different path, leave them.

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for a new international technological order

in Africa's barren soil

the totality of concentrated technological power of destruction, the armed forces in an African country are now in a position to assert periodically special rights of political primacy and power.

Yet how real is technological power? Is Africa a "technological hardware" at all in modern terms?

The total industrial output of the developing countries generally has been estimated at about 7 per cent of the total industrial output of the world. Half of the Third World's industrial population occurs in Latin America. Africa's share of the world industrial output accounts for less than 1 per cent of the total. One consequence for the Third World as a whole is acute technological dependency.

As Nyerere said: "Owing to relatively small output of machinery and input of commodities, highly insignificant industrial research and development, and a relative dearth of skilled personnel, the majority of developing countries are completely dependent for their industrialization upon companies in the developed countries. They have to buy a technology developed by and for the big international corporations. An estimated 5 per cent of the export revenues of the developing countries are used to pay for imported technology (licences, royalties)."

But does this amount to effective "technology transfer"? Is the dependency temporary? "Technology transfer" is a comprehensive term which encompasses both short-term and long-term technological movements, from computers on lease to African countries to the establishment of local institutes of technology. What aid and what does not fit is subsumed under "technology transfer".

In contrast, "technology transplant" borrows a metaphor from biology to imply the need for receptivity in the host body. Some compatibility is needed between the thing "trans-

planted" (be it a heart or a seed) and the recipient.

Our first proposition in this assessment is that there has been a considerable amount of technology transplant to the Third World in the last 30 years – but very little technology transplant.

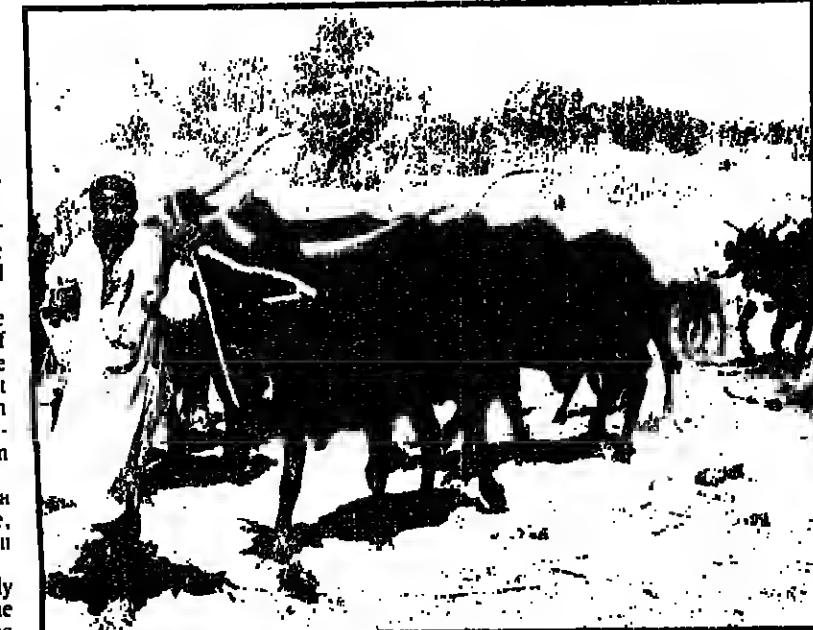
Especially in Africa very little of what has been transferred has in fact been successfully transplanted. Very little has taken root. The question is: Why? While the normative climate is favourable to technology transplant, the structural and sociological soil is still relatively barren. While indeed there is interest in, and enthusiasm for, a technological culture, the actual sociological soil still tends to reject what is being transplanted.

The climate of opinion in much of the Third World favours moves towards "modernization", "industrialization", more efficient "rural development" and faster modes of travel. Apart from a few poets and philosophers, there are no major agrarian movements opposed to industrialism and technology change. Even in revolutionary Iran the passions are directed more against cultural westernization than against industrial modernization.

India loves and reveres the late Mahatma Gandhi, but even those contemporary Indians who favour cottage industries often tend to see them more as an additional developmental strategy, rather than as an alternative to the Tinas and the steel industries.

The more militant economic Gandhians (urging a return to economic simplicity) have so far had little impact on policy or indeed on organized mass opinion.

Africa and the West Indies have also produced from time to time dedicated economic primitivists. The whole nuptial school in Africa and the West Indies has at times included nostalgia for the economic simplicity of the African past.



Technology transfer: have Africans become too dependent on western scientific achievements and are they trained to be used by science rather than to master it?

the entrepreneurial skills. The profit motive is a desire for profit. It is not necessarily a skill in obtaining it.

African businesspeople in places like Nigeria, the Ivory Coast and Kenya are eager enough to maximize their returns. But many are more comfortable sitting on boards of directors than trying out new trading techniques. Risk-taking as an aspect of creative entrepreneurship is often underdeveloped in the Third World. Easy money and safe investment are preferred.

Even the western puritanical principle of "Make money – but do not spend it," is honoured in the breach. Money is made – but promptly spent ostentatiously. Reinvestment in better equipment or more effective techniques is seldom elevated to a priority. When new equipment is bought it is the wrong equipment.

As for the Protestant principle of "industriousness" (or the work ethic) as a moral principle, this is often more characteristic of African peasants than of the African bourgeoisie. The latter have indeed been converted to the profit motive in many parts of Africa – but even when they are religiously Protestants, they have not necessarily been converted to the "Protestant ethic" in the classical economic sense that Max Weber reminded us about in his study *The Protestant Ethic and the Spirit of Capitalism*. The profit motive is strong in much of Africa, but entrepreneurship is still weak. This is part of the barrenness of the sociological soil for effective transplantation of relevant technology.

Even the educational systems in Africa are better in transmitting western values and tastes than western skills and techniques. The schools bequeathed by colonialism are instruments of cultural re-orientation and not instruments of economic transformation. In the classroom there is acculturation rather than training, the cultivation of the arts of conversation rather than the transfer of techniques of production.

African universities are on the whole designed to produce communicators rather than creators, masters of verbal rather than manual skills, and literate in the craft of innovation.

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Colonialism preferred imitative communicators to innovative creators. Colonial schools were designed accordingly.

Scientism rather than the scientific spirit emerged out of colonial educational structures. The ideology of "modern scientism" rather than the principle of genuine scientificity held sway on graduation day and beyond. Africans were trained to be awed by science rather than to master it, to be impressed by western scientific achievements rather than to cultivate their own scientific self-confidence. The ideology of scientism made Africans not only awed by western science but helplessly dependent upon it psychologically.

These are some of the contradictions which have gone towards making the post-colonial soil so inhospitable for effective technology transplantation. The climate of opinion is still in favour of technological development – but fundamental changes are needed sociologically and structurally.

To carry the metaphor of the soil a stage further, fertilizers are needed to help enrich the soil and enable the plant of new technology to take root. It is not enough to complain about North-South abuses and the genuine excesses of transnational corporations. It is not enough to focus on limitations of copyright and patent, or excesses of exploitation, real as these problems are. Sooner or later we have to confront the deficiencies of the host soil – those caused by colonial distortions and those caused by indigenous cultural divergences. What may be at stake are patterns to educational systems, from a distorted Protestant ethic to the imbalances of the world economy.

The quest for a new international technological order must begin with the issue of fertilizers – technological fertilizers to enrich the host soil in the Third World and make it more receptive to the genuine transplantation of the skills of production and the craft of innovation.

Peter Knight looks at the latest changes in allocating funds to the colleges and polytechnics

The allocation of the advanced further education pool for 1983/84 has now been announced. This will be the fourth year in which the pool has been "capped", and the second year in which unit funding has been used to distribute it. A system of unit costs is usually designed to achieve two objectives. First, it should ensure that any shortfall in the amount of money available is largely met by those institutions that are perceived to be more expensive. Second, it should recognize that different types of course cost different amounts to run and as far as possible it should provide those different sums. An obvious question is how successful is the method that has been used in 1983/84 in achieving those objectives.

The basic structure of the 1983/84 allocation is similar to that used in the current financial year. It employs the concept of "common funding", whereby the majority of the quantum is distributed on a straight unit cost basis; it also has a system of "further funding" that provides mitigation to prevent too great a rate of change. However, while the structure of common and further funding is not unfamiliar the actual operation of these two systems has changed significantly from the current financial year.

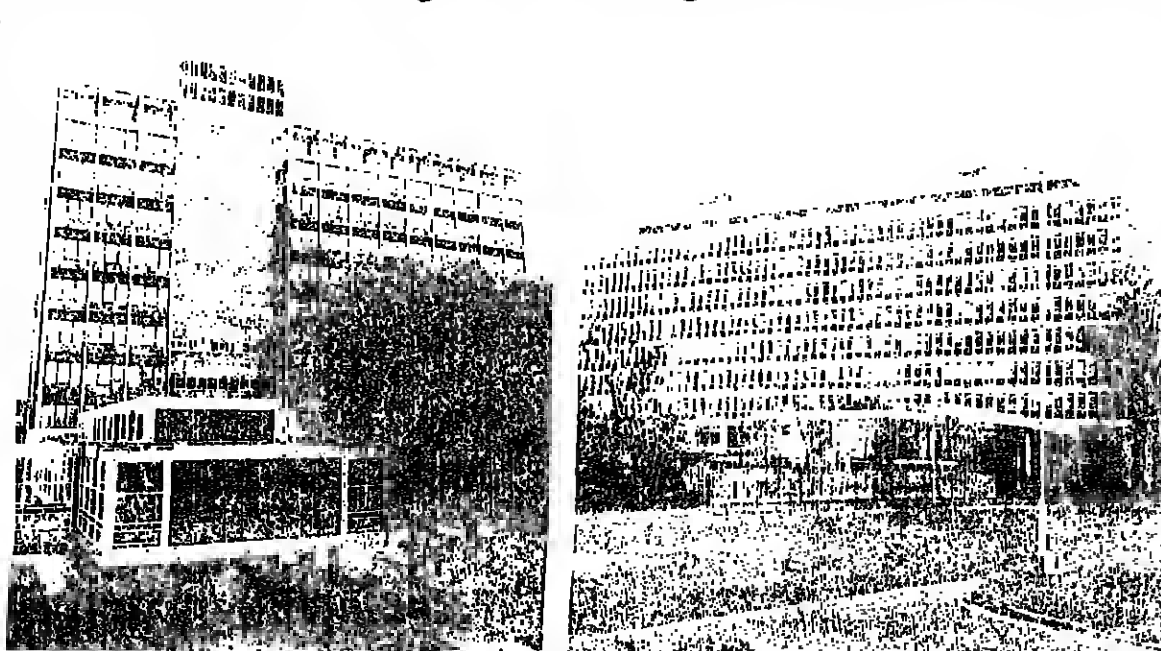
The earliest changes to appreciate have occurred in common funding. In 1982/83 this varied between different types of institutions. The polytechnics had a different amount of money in common funding from the other major establishments. For laboratory-based subjects the polytechnics received, from common funding, £3.851 for each student, the OMEs were allocated £2.4821 for non-laboratory subjects and the polytechnics received £1.929 per student as against the allocation to the OMEs of £2.092. These figures have some interesting features. The polytechnics received substantially more money for their laboratory students than the OMEs and slightly less money from their non-laboratory students. This was a result of a calculation that looked at the number of staff teaching in each type of activity in each institution and allocated money as a result. As there were different teaching patterns between polytechnics and the OMEs different figures resulted from the calculations.

In 1983/84 there is no difference in the allocation of common funding as between types of institution. Consequently the common funding figures for all colleges in 1983/84 are for laboratory students £2.957 and for non-laboratory students £2.112. All these figures are actual allocations in cash.

The most superficial inspection of the unit costs in common funding between 1983/84 and the figures that were provided for 1982/83 will show that substantial changes have taken place. There are a number of minor reasons for this and one major one. The minor reasons include the fact that the student numbers upon which common funding was based have been moved forward from November 1980 to November 1981. An additional factor is that for the 1982/83 allocation the quantum was divided into two sub-quanta, one for the polytechnics and one for the OMEs, before common funding was applied. This allowed the Department of Education and Science to massage those two sub-quanta to include such factors as a penalty for the OMEs for their alleged failure to reduce their unit costs as quickly as the polytechnics.

The most significant change between these two years is that in 1982/83 the student-staff ratios and the unit costs were derived from a count of students and a count of members of staff undertaking advanced work. The student count was of students enrolled on courses given by the Further Education Statistical Record. The staff count was of members of staff devoted, as far as possible from the Annual Monitoring Survey. Unfortunately the classification between laboratory and non-laboratory subjects between these two surveys is not consistent. Hence students in certain subject areas were classified as non-laboratory-based while the staff who were teaching them were regarded as laboratory-based. This produced a low student-staff ratio for laboratory-based subjects and hence a high unit cost and for non-laboratory subjects a low student-staff ratio and a low unit cost.

The subjects where this was particularly marked were mathematics and computing. As can be seen for the



The polytechnics of Teesside (left) and Brighton where reductions between 1981/82 and 1983/84 were significantly above 15 per cent.

Ripples in the pool

polytechnics this gave a cost differential between laboratory and non-laboratory subjects of nearly 2:1. This was not an accurate reflection of the actual costs that operated over the system as a whole.

For 1983/84 common funding has been based on the traditional weighting between laboratory and non-laboratory based subjects of 1.4:1. Such investigations that have been possible show that this is a fair assessment of the actual differences in costs. Never the less it is a very substantial change. If no other factors intervened it would mean that institutions would get 30 per cent less funding for every laboratory-based student in the coming financial year. A corresponding increase will occur for those students doing non-laboratory subjects. This is probably the largest single change in the common funding and it represents the movement of about £30m around the system between these two years.

The whole of the allocation system contains errors and inequalities

A desirable feature to the common funding system for 1983/84 is that the same unit of funding is applied to all out of these errors by cushioning institutions against the worst effect of them. The starting point for calculating further funding was to look at the amount of money each college had actually spent in 1981/82 (the year before unit costing was fully introduced) and compare this with the amount of money allocated by common funding in 1983/84. Any deficit represented the extent of the cut that was being imposed upon them and hence the claim that they could make on further funding.

Once further funding had been fixed as a percentage of the quantum the only remaining issue was the maximum reduction that was regarded as acceptable for an institution between 1981/82 and 1983/84. The effective choices narrowed down to a maximum of either 15 per cent or 20 per cent. For the polytechnics only three institutions would have been affected by this decision. The polytechnics of North-East London, Brighton and Teesside had reductions significantly in excess of 15 per cent. Hence if the maximum reduction had been set at 20 per cent these three colleges would have been affected more seriously than others.

For the OMEs, 14 of the major institutions would have been affected by a reduction of 20 per cent rather than 15 per cent. After a discussion that can be politely described as difficult the NAB board voted by eight votes to nine to adopt a limit of 15 per cent on the maximum reduction that should occur between 1981/82 and 1983/84. The counter-proposal was that the polytechnics' unit of funding should be increased by 10 per cent in recognition of the additional costs associated with degree and research type activities.

concentrating on their full-time and sandwich work. As will be seen the signal is now more blurred than was originally intended because of decisions that were taken later.

A further small change in the count of student numbers was that students who are undertaking work in computing and related disciplines were regarded as laboratory-based for the purpose of the 1983/84 allocation rather than non-laboratory which had been their position in 1982/83. Interestingly the Welsh Advisory Body also reclassified librarianship to a laboratory-based subject but this decision was not mirrored in the National Advisory Body.

Once the system of common funding had been agreed the main political arguments centred on how the further funding system should be operated. Further funding distributes comparatively small proportions of the quantum. It is now set at 12 per cent. The original purpose of further funding was to provide some cushion for institutions that had historically been high unit cost against the consequences of an inadequate pool allocation going to them from common funding. It is probably becoming accepted that there is an additional feature of further funding. This is that it should be recognized that the whole of the allocation system contains errors and inequalities. Hence further funding provides a smoothing out of these errors by cushioning institutions against the worst effect of them.

The aggregate effect of these three changes put the NAB committee in a difficult position. Essentially it was now being argued that by relating further funding to the amount of money that had been spent in 1981/82

One of the reasons for the concern of the polytechnics was that any comparison between the 1982/83 and 1983/84 allocations showed that the polytechnics seemed to be taking a larger share of reduction than the colleges. The polytechnics' share of the quantum was smaller for 1983/84 than it had been for 1981/82. There are three reasons why the share of the quantum that the polytechnics attracted had increased. First the other colleges had increased their student numbers by more than the polytechnics. Hence the moment the decision was taken to use November 1981 student numbers rather than November 1980 the polytechnics share of the quantum was reduced. The decision to roll forward student numbers had to be taken so that so far as possible the AFE pool should fund students where they are now rather than where they had been.

The second reason for the reduction in the polytechnics' allocations was not actually a reduction at all. In the announcement of the 1982/83 pool the entire catering and residence costs for the whole authority was allocated to the polytechnics' proportion where the authority had a polytechnic. Hence this money was, quite properly, removed from the polytechnics' budget within the authority as it was never intended to be allocated to that college. Third the reduction that occurred in the unit cost of laboratory-based students adversely affected the polytechnics more than it did the other colleges. The aggregate effect of these three changes put the NAB committee in a difficult position. Essentially it was now being argued that by relating further funding to the amount of money that had been spent in 1981/82

The NAB solved the political difficulties but left the technical problems

was ignoring the money that the NAB allocated in 1982/83. As a college's expenditure was likely to be heavily influenced by 1982/83, which was the first year in which full unit costing was introduced, this was not an acceptable procedure.

A solution to this problem was devised which, while complex, was also masterly. The objectives that had to be met by the solution were first that it pay some attention to the allocation in 1982/83 and second that it should not sacrifice the principle of providing the same level of common funding to each institution irrespective of its type.

The proposal that was finally agreed in the committee was that further funding should now be toughened so that institutions could be required to take a maximum reduction of 20 per cent rather than 15 per cent between 1981/82 and 1983/84. The common funding and further funding could then be added up for each college and compared with the allocation received in 1982/83. After appropriate adjustments had been made to replicate the figures to ensure that they were compa-

table, colleges were allocated half the difference between their 1982/83 allocation and their allocation for 1983/84 based on common funding as has already been described and further funding with a maximum reduction of 20 per cent.

The overall effect of this proposal, which applied to all institutions and authorities equally, was that the polytechnics' share of the quantum increased by 2.3 per cent from 64.6 to 66.9 per cent. This increase was directly due to the fact that they had had a higher share of the quantum in 1982/83 (68.4 per cent). A secondary effect of the decision was that a number of improvements that had been introduced in 1983/84 were now of less effect. The enhancement for part-time students, the placing of computing in laboratory-based subjects, and the correct cost differential between laboratory and non-laboratory-based subjects will now all have less significance. This is simply because they were not incorporated in the 1982/83 allocation but only in the 1983/84. Therefore in financial terms their effect is only 50 per cent of the effect that they should have had had this modification not taken place. These particular signals to the system are now somewhat fogged and remain important only as statements of future intent rather than as mechanisms that guided money into particular directions.

There are numerous other problems of a technical nature in the distribution system. While the NAB committee solved the political difficulty it has left as its heritage the technical problems and errors that existed in 1982/83 and carried them forward for one further financial year. That is particularly sad as the 1983/84 financial year will be the one immediately before the NAB attempts to move to programme finance in 1984/85.

Whatever the faults of the distribution system it is now determined for the coming financial year. However, there is one major problem which was not foreseen at the time that the allocations were made. This is the financial consequences of the decisions of the Law Lords on the question of "ordinarily resident" of students who had previously been given oversens student status.

The pool allocation to institutions assumes that they will receive a certain amount of income from overseas student fees. The assumptions of income are based on the historic number of overseas students that that institution has recruited. Now an unknown, but many cases high, proportion of those overseas students will be only required to pay the home student fees if the Law Lords' decision has general applicability. Therefore, colleges will not be receiving a significant source of income that they were assumed to be having available. In some institutions the losses could be of substantial proportions; in others the effect is marginal or small. Over the system as a whole it is exceptionally difficult to make a reliable estimate of the loss of income from this source in 1983/84.

So there are two immediate problems. First, action ought to have been taken to increase the quantum to compensate for the total loss of fee income that is likely to occur. Second, whatever is done in relation to the quantum the distribution of the present quantum is now based on assumptions which are no longer valid for individual colleges. Hence there will be disparities over the system as a result.

It would be pleasant to be able to argue that the second year of a unit funding system is a significant improvement. I do not believe that such an argument can easily be sustained. We now know far more about how the system operates, the sources of data that have to be used, and the accidental effects of inconsistencies within that data. Never the less for valid political reasons all that knowledge has not been used. Equally external factors, completely outside the control of the NAB or the DES, have disrupted some of the principles upon which the allocation was done. Let us hope that the funding system can at least be reduced when the move to programme finance takes place in 1984/85.

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by John Gooch

Finest Hour: Winston S. Churchill 1939-1941
by Martin Gilbert
Heinemann, £15.95
ISBN 0 434 29187 0

In 1940, Winston Churchill was presented by Hitler with a challenge which he was sublimely well equipped to meet. Taking the political helm from Neville Chamberlain's faltering hand, he made the war his own by exerting personal control at every level. Then, after it was all over, he wrote a six-volume account which was carefully constructed in order to provide an historical justification for the faith which had kept him going during the period when Britain stood alone: that a "special relationship" which linked together Great Britain and the United States in some ill-defined but indissoluble way would eventually compel America to enter the war and help Britain win it. During the first 27 months of the war Churchill poured all his energies into battling Hitler and winning Roosevelt. In seeking to tell Churchill's personal story from September 1939 to December 1941, Martin Gilbert has adopted a vantage point which, while it has its limitations, allows him to display all those qualities, both positive and negative, which enabled "Winnie" to face up to the German challenge.

When Churchill returned to the Admiralty in September 1939 his pleasure at being back in familiar surroundings once again was almost palpable. He threw himself immediately into the business of war and at once displayed the streak of strategic impetuosity which led to the debacle at Gallipoli, calling for the Navy to force a passage into the Baltic and demanding that an army of forty divisions be created within twelve months. Chamberlain's satirical justification of rejection of the latter demand prompts Churchill's biographer to emerge from behind a mountain of documentation and offer a rare personal judgment: "Once again the priorities of war policy were imposed by the needs of the strategic situation, but by the dictates of neglect". Assuming that these two considerations pointed in opposite directions - which they did not - this seems to suggest that Britain would have been better off in 1940 with more tanks and guns at the price of fewer Hurricanes and Spitfires. The biographer seems to have sided a little too hastily with his subject on this occasion.

During the winter of 1939-40 Churchill became preoccupied with the need to interrupt the ore supplies reaching Germany from Scandinavia. In the last resort he was prepared to mine Norwegian territorial waters to stop it, but wider vistas opened up when the Russo-Finnish war began on November 30, and he now proposed getting Norway and Sweden involved in that conflict and then moving in to help them, and in so doing shutting off their ore trade with the enemy. So light-heartedly was sheer foolishness: not only would it have piled up the odds against Britain to even higher levels, but it also went against Churchill's own estimation of the value of the partition of Poland in mid-September, which had given Hitler an eastern front he must guard and thus hindered his attacking the west. Drawing Russia into a war against Britain would have cemented the Berlin-Moscow axis more firmly together, at least for long enough to put paid to Britain and France. And in any case Scandinavian ore was not as vital to the German war economy as Churchill supposed, and could easily be substituted by supplies from Spain and Yugoslavia.

The nightmarish possibility of a Russo-British war disappeared when the Finns, providentially sued for peace on March 13, 1940, and Churchill went back to his earlier option. The mining of Norwegian territorial waters began on April 8, and the German landings in Norway which began the following day simply reinforced his determination to land a force at Narvik. This ill-considered venture, which finally ended in withdrawal in the first week of June, demonstrated the wilder side of Churchill's nature and he was lucky that his political reputation survived it. As his wife Clemmie shrewdly noted in the margin of his postwar account of the whole episode, "Had it not been for your years in exile + repeated warnings re. the German peril, Norway might well have ruined you". Churchill needed restraint, and later on in the war the Chiefs of Staff provided it - although their master was never as ready to defer to them as is suggested here. At the Admiralty he rode on a looser rein.

By the time that the attack on Narvik was finally launched on May 28, 1940 Churchill had already become Prime Minister. He did so by the uncharacteristic act of keeping his mouth shut. What qualified him to succeed Chamberlain, as Mr Gilbert very successfully demonstrates, was his performance in the Commons, which was masterful. However, this might well not have been enough, for although the Labour Party would not join a national government led by Chamberlain they were apparently prepared to serve under Halifax. Advised by a friend to hold his tongue at the critical meeting with Chamberlain and Halifax, Churchill did so, and Halifax talked himself out of the job. On the morning of May 10 the Germans invaded France, and by the evening Churchill was premier. He was perhaps not quite so unwaveringly pugnacious at that moment as he appears to have been: an entry in Chamberlain's diary for May 26 to the effect that the new Prime Minister would jump at the chance of getting Britain and himself out of a jam by handing over Malta, Gibraltar and some African colonies if it were possible is not cited. But he was certainly now in an office better suited to his talents: in the wise words of Sir Ian Jacob "Winston's mind was so immensely active, he could only be Prime Minister".

After the collapse of France, Churchill's stand of resolute defiance was grounded in the certainty that America must intervene on Britain's behalf to an ever-increasing degree until she finally became a fully fledged belligerent. The prospect that America would come to the rescue of the mother country in the face of a threat to deeply shared values was the only card in Churchill's hand in the summer of 1940 and he played it repeatedly, both then and later. It certainly seems to have won over his biographer, who writes that in mid-May 1940 both General Marshall and Henry Stimson were "willing to authorize the despatch of essential and costly war materials to nations that might not preserve their independence for another six months, or even six weeks". This is well wide of the mark. On May 22 Marshall urged that the United States concentrate on hemispheric defence, the only strategy which was within her current capabilities, and during June he and Admiral Stark pressed Roosevelt to curtail aid to Britain. The Churchillian view of Anglo-American relations colours Gilbert's account at a number of crucial points, but the facts themselves suggest a different interpretation. Churchill and his hangers-on were not so much drawing Russia into a war against Britain as they were trying to get the Berlin-Moscow axis more firmly together, at least for long enough to put paid to Britain and France. And in any case Scandinavian ore was not as vital to the German war economy as Churchill supposed, and could easily be substituted by supplies from Spain and Yugoslavia.

The nightmarish possibility of a Russo-British war disappeared when the Finns, providentially sued for peace on March 13, 1940, and Churchill went back to his earlier option. The mining of Norwegian territorial

BOOKS

An emblematic prime minister

his own pet solution: "Leopard Groups", instituted on June 28, which were to be held no more than four hours from the coast and were to fall upon an invader after he had landed and while he lay sprawled on the beaches. Seeing the war from a Churchill's-eye viewpoint, Martin Gilbert passes over this in a sentence, leaving the reader unaware of the chaos which the Prime Minister generated by completely disregarding the accepted service view that the best chance of fending off an invasion was by meeting it on the beaches and by insisting on quite a different strategic logic. The Leopard Groups were never put to the test, but the manner in which they were created says a lot about Churchill's relationship with the professionals. Always fondest of the unorthodox, the Prime Minister had to be persuaded, cajoled and sometimes bullied into accepting professional advice. Later on in the war the incomparable Sir Alan Brooke successfully held the tiger by the tail: at this time Dill and Poind were being worn down in the attempt.

On December 7, 1940, just as Wavell's North African Offensive began, Churchill sat down to write to Roosevelt urging him to supply much more than the limited volume of munitions Britain could pay for in hard cash. Just as, in July, Roosevelt had sent colonel "Wild Bill" Donovan to weigh Britain's chances before parting with fifty somewhat decrepit but very necessary destroyers, so now he sent his personal representative Harry Hopkins, not quite as Gilbert suggests to avert "the danger of economic conflict" and to put lines of communication between president and premier "on a sounder and more personal basis", but rather to assess whether Britain was worth the risk of further investment. Once he had arrived, Hopkins was wooed assiduously and successfully by the Prime Minister; as one member of Roosevelt's cabinet remarked at the time, if the President had sent over someone afflicted with bubonic plague "Churchill would, nevertheless, see a great deal of him". The result was Lend Lease.

The first six months of 1941 brought the debacle of Greece and Crete - another instance of Churchill overruling the military - and mounting indications from the ENIGMA decrypts that Hitler intended to attack Russia. When the attack came on June 22 Churchill rushed to the microphone to offer Russia partnership and aid - an act readily explicable given the circumstances of the moment, but one with consequences which Churchill seems not to have thought through very far. For one thing, the aid had so generously offered was not what was already supplying; instead a large part of it was carved out of the existing British allocation. For another Beaverbrook, sent to Russia by Churchill with "a considerable measure of discretion", gave everything away without bargaining over strategic policies or political objectives, or even pressing the Russians for production information. Churchill could be accused of failing to profit from a buyer's market.

During a visit to Dover in the company of the Prime Minister Hopkins had been much struck on hearing a workman remark as Churchill passed by, "There goes the bloody British Empire". Whatever else Roosevelt was prepared to fight for, he was certainly not prepared to fight to preserve that empire. Churchill was, and this profound difference of outlook underlay much of what happened at the first wartime meeting between the two men, which took place at Argentia Bay in New foundland on August 9, 1941. Out of this meeting came the foundation of the United Nations, and from which flowed much confusion and dispute. Article III pledged both powers to "respect the right of all peoples to



Churchill watches the arrival of one of the first Baling B-17 "Flying fortresses" from the United States on June 6, 1941.

choose the form of government under which they will live; and . . . to see sovereign rights and self-government restored to those who have been forcibly deprived of them". In pointing out that, only eight days later, Churchill was expressing considerable reservations about whether this clause applied to the British Empire, Gilbert does not entirely convey the extent of the Prime Minister's manoeuvring: it was he who added the phrase "sovereign rights" to the clause. More surprisingly, there is no reference at all to Article IV, in which Roosevelt sought to ensure that the closed economic systems of the 1930s did not re-emerge after the war by pledging the powers to work for free economic exchange. Churchill's addition of the phrase "with due regard for our present obligations", which was designed to preserve the Ottawa agreements, cut right across Roosevelt's intentions. Others have detected the hand of Churchill the Imperialist at work here.

Hitler's attack on Russia made it less and not more likely that America would intervene directly in the war, for with a major land power now actively engaged in the struggle with Hitler Britain's position looked less insecure. It was the Japanese attack at Pearl Harbour on December 7, 1941 which brought America into the war - an event which comes as almost as much of a surprise to the reader as it did to the victims, since Gilbert makes only the briefest reference to Far Eastern strategy in his preface to this date. Perhaps this material will form the preamble to the next volume. In the meantime the reader is left in ignorance of Churchill's continued refusal to heed the advice of the Chiefs of Staff and reinforce the Far Eastern garrison in 1941, of his statement four days before Pearl Harbour that the possibility of Japan commencing hostilities was "a remote contingency", and of much else besides.

Churchill became that rare phenomenon, an emblematic Prime Minister. He personified the British bulldog, alone but defiant in 1940, and he still does. The bulldog is a little overweight - perhaps the con-

sequence of its rich diet of Bovril (the first syllable pronounced to rhyme with Hovell and sardines, champagne and oysters, brandy, whiskies-and-soda and outside cigars - but its stance is determined. The hat is jammed firmly on the head, the cigar clamped between the teeth, while the right hand makes a deliciously ambiguous gesture, at once defiant and sexually insulting. The fact that there seems something slightly absurd about this small, roly-poly figure commanding armies and navies, sacking and promoting generals, dealing out defeat and destruction to the elegant and austere professionals of Hitler's staff only increases the power of the image.

The great merit of Martin Gilbert's account of the first two years of Churchill's war is that it allows us to appreciate the reality behind that image. As the war unfolds day by day, we are able to feel the pressures and strains of coping with frequent setbacks and more occasional successes. If Churchill lived from hand to mouth then we need not wonder at it, for the press of events would have overwhelmed a lesser man. As well as observing the Prime Minister's official face, portrayed by means of a vast array of cabinet minutes, state papers and minutes, we are also given access to the private figure through the invaluable diary of Sir John Colville. Churchill's personal assistant until September 1941, Wayward, impulsive, petulant and sometimes childish in his behaviour, Churchill is shown also to possess gifts of firmness of purpose, determination and seemingly inexhaustible energy with which to counterbalance what would have been failings in other men but seem actually to have been advantages in helping him undertake his task of beating Hitler. The final impression is of a man reveling in the opportunity to lead and to command. All in all, he did the job rather well.

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BOOKS

Living together

Cohabitation Without Marriage: an essay in law and social policy by Michael D.A. Freeman and Christina M. Lyon. Cower, £15.00. ISBN 0 560 04551 1

Marriage remains the preference of the great majority of couples, as Michael Freeman and Christina Lyon point out, cohabiting couples do not account for more than one-eighth of the couples who live together in any country in the western world. Yet everywhere cohabitation is on the increase, sometimes as a form of trial marriage, sometimes instead of marriage, and the trend seems bound to continue.

The reasons are fairly clear: both religion and conventional morality have weakened their hold; marriage is often associated in younger people's minds with traditional patterns and sexual roles which they reject; the increase in divorce and consequent instability give marriage less point, and in any case a growing proportion want the freedom to enter and leave relationships when they wish.

The authors are academic lawyers and their subtitle, "an essay in law and social policy", indicates their approach, though it should be added that law overstates social policy in the discussion. Their book is largely an examination of the ways in which the law is responding to the growth of cohabitation. They give particular attention to England, but also review developments in other countries, including Australia, the United States, Sweden, France and Yugoslavia.

Their main finding is that virtually everywhere the law is disposed to treat cohabitation as if it were like marriage. For the most part judges, legislators and bureaucrats inevitably see marriage in traditional terms, based in particular in the economic dependence of wife or mother on husband or father. Largely out of a desire to protect what we see as the interests of dependent women and even more important, their children, they now, along with social policy instruments such as social security schemes, has sought to approximate the rights and responsibilities of cohabiting partners to those of married couples.

Freeman and Lyon, taking a feminist and libertarian stance, view this development "with some alarm", arguing that it makes it increasingly difficult for people "to escape from marriage by cohabiting". As they see it, one of the problems is that, for reasons of bureaucratic tidiness and to avoid the state taking on the financial liability for all children, the convenient assumption has been made that mothers provide the main care for the children and therefore, if left alone, need the support of their ex-partner or his estate. But, if the cohabiting couple had rejected marriage and chosen instead a less conventional arrangement with a different distribution of sexual roles and responsibilities, may the law not be forcing them into what the authors call "the limited, sexist-based model of traditional marriage"?

There is obviously some force in this, though solutions are not readily available. Freeman and Lyon do not really face the cohabitation dilemma over social security benefits: how to avoid treating a cohabiting couple as if they were married without either making married couples worse off than cohabiting ones or accepting a large increase in public spending? They do, however, acknowledge the problem of dependency when they say that, though they would like to see an end to the maintenance of ex-wives and their cohabiting sisters, they appreciate that the duty to maintain results from the "economic realities". They go on to say that "Until women have equality in the economy there may be no alternative to accepting that on breaking up the family unit the economic provision continues to be provided". Quite so, but this is part of the argument for a policy of protection and support, particularly for dependent children, which underlies the legal treatment of cohabitation as something very like marriage.

Nevertheless, they have a case, and one that deserves serious attention. If cohabiting partners had wanted to marry they would presumably have done so. Their freedom to choose a different kind of relationship clearly is thwarted, as this book argues, if the law insists on treating them as if they were married.

The way forward, the authors argue, is through contracts setting out the agreed rights and duties of partners. There are at least two problems about this, as they themselves recognise. The first is that it is too much to expect all, even most, couples to go to the trouble

Old age creeping up

Beyond Sixty-Five: the dilemma of old age in America's past by Carole Haber. Cambridge University Press, £17.50. ISBN 0 521 25096 X. Aging in Early Industrial Society: work, family and social policy in nineteenth-century England by Jill Quadagno. Academic Press, £16.20. ISBN 0 12 569450 4

As advanced industrial economies move sluggishly through the last two decades of the twentieth century the problem of supporting the elderly is becoming acute. On the one hand, mass unemployment increases pressure for early retirement, old age pensions have become an emotive political issue and areas such as geriatric medicine and sheltered housing are seen as relatively underfunded. Yet on the other hand, against a background of fiscal crisis in welfare, where public expenditure cuts are seen as therapeutically virtuous, the cost of supporting aging populations may well prove to be prohibitive. This dilemma has encouraged social historians to look back at previous societal perceptions of aging. Was there ever a time when the elderly were venerated? Was there ever "a golden age of senescence"?

Both these interesting and well-written books answer that question with a cautious no, but emphasize that in America and Britain respectively the status of the elderly probably declined over the course of the nineteenth century. Carole Haber's concise and tightly argued study begins with a description of old age in colonial America, then examines nineteenth-century perceptions of aging through the eyes of social workers and the medical profession (who, not surprisingly, cited repeatedly but unsuccessfully to categorize old age as a fixed medical phenomenon). She describes the growth of charitable institutions for the elderly and - in probably the best chapter - shows how occupational retirement pension schemes developed for a variety of reasons, including anti-trade union employer paternalism. By the end of the nineteenth century, she concludes, a combination of forces was producing a conceptualization of old age that was differentiating the elderly more sharply from the rest of society; the status transition to retirement had become more abrupt.

Dr Haber has consulted an impressive range of sources (and she includes a valuable bibliographical guide), but sometimes her reliance on non-quantitative evidence results in rather ambiguous verdicts, as when she concludes that in eighteenth-century America "attitudes toward old age were hardly uniform or unvaried". Again, in tracing the evolution of perceptions of aging she tends at times to divorce ideology from its economic and political background: while she skillfully demonstrates how, at a time of technological change in the economy, the concept of mandatory retirement (enforced through company pension schemes) benefited the interests of employers by forcing inefficient elderly workers out of the labour market, she is less clear on precisely why the newly professionalized doctors, church workers and social scientists of the nineteenth century adopted increasingly rigid definitions of old age. Nevertheless, Dr Haber has

which is a good deal greater than that of a visit to the Register Office. The second in that, as shown by the experience even of Sweden (where the contractual alternative has been taken further than elsewhere), it is difficult to provide in advance for every unforeseen dispute. Despite the difficulties Freeman and Lyon are, however, probably right in seeing this as the most hopeful course. Workable alternatives to marriage are more likely to be devised if at least some couples try to be explicit about what they expect from the partnership, and the contracts of those who do use them can subsequently provide a useful basis for other couples.

This book combines academic seriousness (in the best sense with its polemical line. Not every reader will agree with the conclusions, and some will find the legal language heavy going in parts. But it is a useful contribution on a subject that is certain to grow in importance.

Peter Willmott
Peter Willmott's most recent book is "Tuner City Poverty in Paris and London", with Clark's Mudge.

provided us with a stimulating investigation of the relationship between ideology and social relations. Jill Quadagno's study is longer but rather less consistent in quality. She provides a useful critique of general modernization theories which attribute the elderly's apparent loss of social status to the industrialization process (in particular, loss of support through the extended family), and then illustrates this by exploring relevant historical themes. There is an excellent chapter on changes in household and family structure, where quantitative evidence from the village of Chivers Cotton, near Coventry, illuminates the argument without overwhelming the reader.

But chapters on demographic change, the Poor Law, retirement and the campaign for old age pensions are rather less successful, principally because over-reliance on secondary sources produces an account that adds little to what we already know. While undergraduates will undoubtedly find it useful to have existing research re-presented between the covers of one book, professional historians may feel that Dr Quadagno is at her best when wrestling with sociological issues. For example, in her conclusion she makes the interesting suggestion that the elderly's loss of status over the nineteenth century may have been over-emphasized through becoming a political issue in the wider battle between capital and labour; the degradation of old age became so much a part of the political rhetoric of the time that a precise retrospective assessment of "status" is now very difficult.

Both authors discuss the important question of whether the elderly as a workforce were becoming less relevant to an increasingly technological mode of production in the late nineteenth century, and thus needed to be "shaken out" of the labour market. The link between technology and loss of social status is one that western societies will need to consider in the future. We thus see in both these books the current relevance of good social history.

John Macnicol

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Giving comfort

Life after a Death: a study of the elderly widowed by Ann Bowling and Ann Cartwright. Tavistock, £12.95. ISBN 0 422 78230 0

Death and bereavement are supposedly the taboo subjects of modern society. One would have difficulty believing this in view of the extensive and rapidly growing sociological and psychological research literature on this subject.

This book is an original contribution to that literature. Whereas previous researchers have concentrated upon the process of psychological adjustment, Ann Bowling and Ann Cartwright also concern themselves with mundane, practical aspects and consider not only the widowed themselves, but also those who help them adjust or fail to do so. Again, while previous studies have paid special attention to those such as the young widowed, children, and others who pose particularly interesting theoretical issues, these authors address themselves to those most likely to be widowed, the elderly.

Bowling and Cartwright are concerned mainly with the practical,

policy-oriented implications of widowhood where, it is to be hoped, their findings will have some impact. They draw attention to the immense strains imposed upon those caring for the terminally ill, especially those who are themselves elderly and frail. (Some of these difficulties are harrowing indeed, and illustrate the lack of provision for those in this position.) They then consider the first few months of widowhood.

Particular attention is paid to the medical profession, especially general practitioners, who do not come out of the examination well. There is an evident gulf between them and their widowed patients at virtually every level. They have insufficient contact, and they lack adequate knowledge about such things as social conditions and even the drugs they prescribe. There are some frightful stories of neglect, lack of sympathy and sheer inhumanity on the part of a few GPs. Reason for hope lies in the fact that younger GPs are rather more helpful than their older colleagues, but reason for despair lies in the selective response rate which indicates that only the more conscientious GPs bothered to reply to the questionnaire.

On the other hand, those who come out well are the families of the widowed, especially their daughters, as well as friends and neighbours. Once again social research shows that it is too soon to toll the death-knell of the extended family or sense of community. It is family, friends and neighbours to whom the widowed turn for help and who often at considerable cost to themselves - provide it.

While the focus of this research is unashamedly practical and policy-oriented, many findings will have theoretical significance, especially in disproving certain assumptions about widowhood. For example, it has been widely believed that anticipation of death during a long illness makes for easier adjustment after widowhood because of the opportunity to engage in preparatory grief; this is not supported in this study. Likewise, it has been found previously that those with a poor marital relationship have difficulty adjusting to their spouse. Yet the evidence here showed that those who fell into this category seemed to display signs of relief.

Elsewhere, there were findings which might have benefited from more sophisticated theoretical consideration. For example, while many widowed complained of not having enough with which to occupy themselves, they were also apathetic, and there was a lack of enthusiasm for joining clubs. Before trying to provide occupying activities or encouraging club membership, as the authors suggest, it might be instructive to consider Peter Marris's point that after bereavement activities and events change their meaning. The widow who no longer pines for the floor may well be asking the question, "What is it all for?" Until that question is answered, activity for its own sake will continue to have little meaning.

Medical sociology is one of the discipline's more acceptable faces. It deals with issues that everyone can recognize as problems and its empirical grounding has enabled it to contribute directly to public discussion. This book is a good example of this: one is inclined to show it to non-sociologists as proof that sociology can be informative and useful.

P. A. J. Waddington

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Young patients

Children in Clinics: a sociological analysis of medical work with children by Alan G. Davis. Tavistock, £11.50. ISBN 0 422 77370 0

Over the last fifteen years medical sociology has become an established component in the sociology curriculum. At the forefront of this development the work of researchers at the Aberdeen Institute of Medical Sociology has done much to indicate the applicability of sociological concepts to the study of health and illness. Any study from Aberdeen is therefore greeted with high expectations. Unfortunately this report by Alan Davis of his research when employed at the Institute fails to meet such expectations.

Children in Clinics is not so much about children but more about doctors working in children's clinics - and what Davis says about the various medical settings in which paediatric services are provided in a "Scottish city" states little more than the obvious.

Davis uses an ethnographic approach in identifying different patterns of interaction and argues that the behaviour brought to the medical examination by a child can be inappropriate to the situation and that this can throw into sharp relief the hidden assumptions about what is appropriate behaviour in such a context. His central point is that, paradoxically, medical work with children is essentially work with parents, usually the mother. Children do not necessarily understand the role of potential "patient" nor appreciate what is meant by the "sick" role; they may not cooperate; they can be easily distracted; often they cannot provide medically appropriate information that will assist the doctor.

For all these reasons the parent is essential in conveying relevant information and in assisting the doctor in gaining the cooperation of the child. But the way in which the involvement of the parent is elicited depends upon the setting in which the examination is conducted. There are differences between the local authority children's clinic where parents are more likely to bring their child along for screening or their own initiative compared to the more overtly clinical setting of the hospital where children are more likely to be referred.

None of this is new or original - as Davis comments, the difficulties of working with children are well known. What he attempts to do is to place the insights within the context of the analysis provided by commentators such as Friedson. While this may be of interest to professional sociologists it is doubtful whether other groups will find the analysis of any particular relevance or use.

Curiously, children figure very little in the discussion. The child's perception of the assessment and the impact that has on their understanding of "being ill" or "being well" is totally ignored. Attempting to put this would have proved difficult - but no more difficult than the problems faced by the pediatricians in eliciting the cooperation of the children. There is a dearth of material on how attitudes to health and illness are socially constructed in the perception of young children. Davis had the opportunity to attempt to remedy this in a specific context but failed to develop any appropriate methodological procedure. Similarly, the views of the parents are not conveyed. In an appendix Davis comments that it was originally intended to interview parents but this did not prove possible. The omission of their views from the analysis is as grave a problem as the exclusion of the views of the children.

The result is that the book is concerned with a medical setting involving doctors, parents and children in which the views of only one group of participants - the doctors - are conveyed. The text is full of vignettes and anecdotes about incidents that will be familiar to many parents. But while these give a certain "feel" of credibility to the descriptive account, the analysis is too narrow to state more than the obvious.

John Brown

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BOOKS

Racine pioneer

Essays on Seventeenth-Century French Literature by Leo Spitzer. Translated and edited by David Bellos. Cambridge University Press, £27.50. ISBN 0 521 24350 4

In this pleasing volume, Professor Bellos has gathered together six essays on seventeenth-century French literature by the Austrian scholar, Leo Spitzer (1887-1960), edited and annotated, translated five of them into English. Only one was originally written in English, and added a good introduction.

The introduction outlines Spitzer's life and characterizes his criticism - and what makes a work unique; his combination of erudition with insight, of history of the language with literature; his conviction that students of modern languages ought to be intermediaries; his belief that a great masterpiece is perfect in all its parts - a rather questionable view, which as Professor Bellos points out, takes for granted what criticism ought to prove, and which precludes value judgments.

The best essays in this volume are those on Racine. If a benevolent despot were to ordain that the existing body of criticism of Racine should be destroyed, Spitzer's essay on *Klassische Dichtung* (translated by Bellos as "classical poetry") in his style, together with the complementary analysis of the *recit de Phedre* in *Phedre*, would be two things for which I should put in a plea. The essay on *Klassische Dichtung*, which occupies over a third of the volume, is one of the few works that can legitimately be described as "seminal". An illuminating and suggestive analysis of the abstract, intellectual, stylized elements in Racine's verse, it foreshadowed further study of his vocabulary and style, and of such aspects of them as his symbolism and use of key words, his use of periphrasis and direct statement, and the power of even the most trivial of details in his work. Both Spitzer's essays and later work along these lines have enhanced - as criticism should - our appreciation of Racine. Spitzer's contention that Racine's work - and, indeed, French classicism in general - contained much that was baroque, then paradoxical and heterodox, is now pretty generally accepted.

The essay on the *Lettres portugaises* runs those on Racine close, though its subject is at most a minor masterpiece. In it, by a careful analysis of the structure of the work, its sources, its style, and its improbabilities, Spitzer establishes that these are not the genuine effusions of a real Portuguese nun, but the creation of a Frenchman, Guilleraque. The essay on *Polyeuxie* uses the medieval *Vie de Saint Alexis* in the Christian tradition of sainthood, a point that needed to be made; and that on the art of transition in La Fontaine is a valuable study of the conscious artistry of the *Fables*. The essay of Saint-Simon's lengthy obituary account of Louis XIV is, to my mind, less rewarding than the others.

Professor Bellos overstates his case when he claims that Saint-Simon, La Fontaine, and especially Guilleraque owe their present place in the literary canon in large part to Spitzer's insights. Guilleraque, perhaps, the other two, surely not - indeed, Spitzer's article on Saint-Simon, Bellos tells us, attracted little attention until 1979. But Spitzer's articles have related their interest and their value. If one disagrees about details, one is struck by this essential rightness. Above all, perhaps, one is impressed by the example he set of scholarship. He combined wide reading and knowledge - and the essays in the volume form only an infinitesimal part of his work - with patient, close, and fruitful study of the text. He had insight and independence; the essay on Racine's *Klassische Dichtung* was drafted without reference to any critical studies except Vossler's book, and for his essay on Saint-Simon he read none at all.

I confess to having turned to this book with some reluctance. There is always the risk that "old verses" are overshadowed in our minds by a poet's mature verse. Yet these are not really Valéry's early works at all. Published as late as 1920, they are poems in which, begun in 1912, the process of revising the verses he had written in his twenties, two decades earlier, came to play an essential, transformative part. A few pages of this powerful study of the immense literary and critical interest offered by a uniquely self-questioning form of art.

If return to an earlier stage of development occurs in all genuine reflection, as Professor Nash suggests, then Valéry certainly made the most of the "play of identification and difference, affirmation and negation" made possible by his particular dialogue with the past. As he leaned towards his early verse, the face he found reflected in the pool was one which painfully resembled that of Baudelaire, Verlaine, Heredia, Mallarmé: a whole ancestral debt seemed to determine his own voice. For Valéry, however, it was not the main critical insight developed in this study - the discovery led to an understanding of the problematic nature of language itself, and from there to one of the most important structural principles of all his poetic works. Where the poems of the Parnasse and of minor French Symbolists show little or no critical insight into the ambiguities of their own structures, the type of discourse he came to pursue is a form of imaginative investigation, one where critical questioning is embedded in the work.

Yet what of the poems themselves, each one separately considered in the second part of the book? The centre of the collection is occupied, we are told, by the figure of Narcissus (*Narcisse*), model of the voice seeking an impossible union with its bodily image



Jean Racine

I have only two minor reservations about this volume. The incorporation of original footnotes into the text within square brackets is disturbing; and though on the whole the translation reads well, occasional infelicities, colloquialisms, or neologisms jar (can "given" really be used as a noun or "foreground" as a verb, for instance?). Reading Spitzer may be neither easy nor altogether pleasurable - this great student of style is no stylist - but it is a humbling and a salutary experience.

P. J. Yarrow

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Old verses?

Paul Valéry's *Album de vers anciens*: a past transfigured by Suzanne Nash. Princeton University Press, £21.20. ISBN 0 691 06526 8

I confess to having turned to this book with some reluctance. There is always the risk that "old verses" are overshadowed in our minds by a poet's mature verse. Yet these are not really Valéry's early works at all. Published as late as 1920, they are poems in which, begun in 1912, the process of revising the verses he had written in his twenties, two decades earlier, came to play an essential, transformative part. A few pages of this powerful study of the immense literary and critical interest offered by a uniquely self-questioning form of art.

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and "figure for the arbitrary structure of figurative language itself", while on either side are poems which question their own stability from within or constitute a growing critique of the opening works. Analysis of the first of these, *La Pluie*, is accordingly accompanied by the earlier version (1891) from which it slowly freed itself and by detailed reference to the verses of Heredia and, in this case, Régier (quoted at length in the Appendix). The magic garden is transformed from within.

It would be tempting to argue that such an approach detracts from the "quiddity" of the poems, allowing them no more than a transitional, albeit innovative, role, and confining them to allegories of Valéry's encounter with the past. The critic's role, yet the striking quality of the analysis of individual poems apart, charges of this kind are largely invalidated by the notion of self-reflection itself, a kind of meta-language ("I can because I see I can't") transcending the claimed effort of thought to equate with words, and making its presence felt as the very heart of the work. Nor - for all Valéry's insistence on the "endlessly unfinished text" - is such a thesis allowed to lead to a no-man's land of free interpretation. By accepting the autonomy of language as inevitable while making use of the laws of language (above all the "Babel" of metaphor) to keep alive the unifying action of the critical consciousness, the Valéry poem might be said to be controlling its own "deconstruction" from within.

Such explicit stand is adopted by Professor Nash on this point, but it is perhaps no accident that the contemporary literary theorist whom she quotes on the subject of communication is Paul de Man, whom some would consider interesting precisely because he makes what hard-line theorists would consider a compromise in "deconstructionist" terms. Here Valéry has much to say to us all.

But the uses and abuses of theory apart, this is a book which, while not afraid to make strong critical statements, never betrays so much interest in its own method as to detract from the task of appreciating the poems anew. Above all it confirms that, transcendental or not, conscious reflexivity can survive as a rich and expressive mode of creation if it is accompanied by commitment to language itself. The constraints of words are not necessary, if, however, "green and necessary" we are truly to "sing in our chains like the sea". Defensive rationalization or not - and are the steps we take to defend ourselves necessarily rationalizations? - this as much as anything is the source of Valéry's remarkable "second Spring".

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Political poet

Alphonsine de Lamartine: a political biography by William Fettes Croom Helm. £16.95. ISBN 0 7099 1027 4

During Lamartine's period of office as Minister of Foreign Affairs in 1848, he was viewed by the British Government with wary respect. In his sixty-eighth year, when he was overwhelmed by debts and when a national subscription was launched in France, a London committee was formed, which generously sought aid for him.

This varied attitude is typical of the British perspective on Lamartine. Later, mainly through the influence of the French curriculum in British schools, he was scanned through a haze of Lake poet, declaiming resonant platitudes on love, sensation and mortality, which achieved for him turn by turn sentimental admiration and suspicious disregard.

In recent years, the increased accessibility of his poetry through detailed and reliable editions, such as the *Pléiade Oeuvres poétiques complètes*, presented by M. F. Guyard, and F. Letessier's critical edition of the *Méditations politiques* for Garnier, has permitted a more balanced view to the

admittedly small number of interested readers on this side of the Channel. The bulk of his voluminous writings, which is in prose and mainly autobiographical or historical, illustrating his ideas and presenting touched-up versions of episodes of his life, remains very little known, as do the details of his diplomatic and political career.

This last point is underlined by William Fettes Croom Helm in his book, where he draws attention to the lack of "satisfactory works of synthesis" on Lamartine and to the two-volume work by H. R. Whitehouse as the only substantial biography in English, but now sixty-five years old and clearly overdue for retirement. Fettes Croom Helm's book does not aim at a synthesis, but is designed, as the author says, "to fill a gap". This it does without question, and it is a welcome addition to the works which are slowly building a firmer and fuller basis on which to judge Lamartine.

The word "biography" in the title is perhaps not fully justified, implying as it does the full evocation of a personality. The portrait of Lamartine which emerges from the analysis, which is almost exclusively political and historical, is a relatively crude likeness. But the author's aim is preeminently the noting of detailed facts, tersely ordered in the text and elaborated with a wealth of detail in footnotes which expertly guide the reader through the mass of information and judgments accumulated around Lamartine's life, career and writings.

The life and career are traced through his years in the diplomatic corps of Louis XVIII and Charles X, and through his period as a *député*, which lasted eighteen years, with its extraordinary combination of career, independence, vision and idealism, which led him to virtual leadership of the Provisional Government for a few months in 1848, and to a spectacular fall from power after the presidential elections of the same year had brought in Louis-Napoléon.

The writings are used for the light they throw on the political life, some, like the *Histoire de la Turquie* (1854-

55) and the *Histoire de la Russie*, being set aside as no "significant political interest". The poems also are used as supporting documents, the content of the political pieces being noted in a laconic paraphrase, as is the argument of articles and pamphlets such as *Sur la Politique nationale*. Towards many of Lamartine's actions and probable motives, Fettes Croom Helm adopts an attitude of measured suspicion. While conceding that Lamartine had "high ideals", generosity and strong verbal and imaginative gifts, he sees personal vanity as the fatal flaw running through the character, clouding Lamartine's political judgment, and inducing irresponsible behaviour and inconsistencies of policy and decision.

In a book which risks becoming tedious through lack of style, the last pages of the chapter "Bonsapartism and Bankruptcy" are the most eloquent, something of the courage and tragedy of Lamartine's last years permeating the clipped sentences. But the astute analysis performs a useful function at times, particularly so in the first chapter, dealing with the pre-diplomatic years, where the sentimentalized image of *L'Amant d'Elvire*, which has clung so tenaciously, is corrected by the facts of Lamartine's promiscuous sexual life, from his last year at school (1807-08) to his marriage in 1820.

BOOKS

Trying to keep the peace

The United Nations and the Control of International Violence: a legal and political analysis
by John F. Murphy
Manchester University Press, £22.50
ISBN 0 86598 079 9

The United Nations is not a name to arouse much hope in the minds of those worried about the state of world affairs, at least in the West. Even more strike seems to be stirred up at its meetings than in the world outside, and, as for the superpowers, for whom the threat to all life chiefly comes, they evidently could not care less what happens at the UN. Taking into account the endless violence in the world today - in the Middle East, South East Asia, Latin America - to talk about the United Nations actually controlling it seems at best a feeble joke. Or an old dream dissipated by reality.

John F. Murphy, a professor of law at Kansas University, is only too well aware of the United Nations' shortcomings, but is not discouraged. He still has enough faith in the organization's relevance to the age-old struggle against violence to make thoughtful recommendations at the end of each of his chapters for making it more effective. In surveying in detail the UN's record in dealing with wars, international and civil, terrorism, revolutionary violence and the whole sad tale of bloodshed, he writes like a nearly but not quite exasperated schoolmaster compiling an end-of-term report. The Security Council "performed admirably" in the Cyprus question, "failed dismally" to meet the challenge in the war between Iraq and Iran, "functioned about as well as one could reasonably expect" in the Falkland Islands crisis last year. As though the council were a person who had his on and off days, instead of an orchestra of nationalistic instrumentalists, each of whom may be performing admirably most of the time, but none of whom plays from the same score.

Still, Murphy's heart is in the right place: he thinks that, with encouragement, the boy can do better. His book wisely distinguishes between the "traditional" violence of international relations - or the use of force to settle differences between states - and violence within states, especially in the Third World, with one faction or another, or both, fed with support from outside. Hard as the UN's task has been in the field of traditional violence, in that of revolutionary violence it has been incomparably harder. After all, the UN Charter was expressly designed for coping with the former, whereas guidelines for dealing with the latter have had to be worked out in the course of practice. Besides, clashes between moral principles have been unusually acute in the second case. Professor Murphy does well to emphasize the charter assumption that all use of force (except in self-defence or with the Security Council's authorization) is wrong, whereas support for revolutionary force - to end apartheid in South Africa, for instance - would be applauded by most UN General Assembly delegates.

In neither field does Murphy think that peace can be maintained by waving the magic wand of reform of the charter, or new rules of conduct, or other institutional devices. About the only institutional change he does propose (one canvassed in a recent lecture at the LSE by Sir Anthony Parsons, the chief British delegate at the UN during the Falklands crisis) is to increase the resources available to the Secretary-General to discharge his authority under Article 99 of the charter to bring to the Security Council's attention any matter that in his opinion may threaten the maintenance of international peace and security. This could be done, he sug-

gests, by creating early-warning arrangements in trouble-spots around the world, so that UN headquarters could know in advance where conflict was brewing.

As the Falklands case shows, even this suggestion is problematic, apart from the cost. But, in its present government's mood, seems unlikely to allow a UN presence on the islands, nor (as Sir Anthony proposes) is Argentina likely to receive one in Buenos Aires.

As Professor Murphy points out, hopes of any radical new developments in UN peacekeeping were laid to rest in the early 1960s, with the crushing of the secessionist movement in Katanga. Not only did the Congo enterprise bring the organization to the brink of financial ruin. It

demonstrated that the conflict between the principle of the territorial integrity of member-states and the demand for independence of minorities within them can put the UN out of action. Its failure in the Biafran crisis illustrated the same point.

What, then, can the United Nations usefully do? Professor Murphy is on the side of caution. "It should be utilized," he writes, "as a forum in which the full pressure of publicity and public opinion is brought to bear to stop the fighting". One notes the brave word "full". But also as a meeting-place for quiet arrangements to be made between world leaders and their agents (one recalls the ending of the Berlin blockade in 1949). And, it might be added, for states to justify the violence they resort to and

to face criticism for the force they use, not a minor departure from the time-honoured usages of power politics. But terrorism, assassination, the pitiless brands of revolutionary force - these are treacherous waters for the UN ship to sail, surely because one man's killer is another's liberator.

The cruel fact is that the renunciation of violence is, to some extent at least, the renunciation of justice, too.

F. S. Northedge

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Types of law-making

Max Weber
by Anthony T. Kronman
Edward Arnold, £9.95
ISBN 0 7131 6361 5

Max Weber's influence in legal education both in Britain and America has been growing in the last ten years or so. This short book usefully outlines and discusses Weber's views on the law.

Anthony Kronman is a professor of law at Yale, yet his interest in Weber is primarily of a philosophical nature. He aims to clarify the neglected philosophical dimensions of Weber's writings and to show that even where Weber did not directly confront complex philosophical issues he nevertheless offered profound insights and succeeded in maintaining a coherent and consistent philosophical position in all his writings - one that requires to be understood by any student of Weber. In essence Kronman sees the positivist theory of value and the will-centred conception of personhood as the vital elements that underpin Weber's extensive writings.

Professor Kronman begins his discussion by outlining the methodological foundations of Weber's work and then, in three chapters, he outlines types of authority, the different types of law and law-making, and changing forms of contractual association. The presentation is detailed and knowledgeable. Everyone who has tried to come to terms with Weber's views on law, legitimacy and authority will admire Kronman's discussion even though they may not accept all his interpretations. Most people seem to agree that Weber refers to "rationality" and to "formality" in different and ambivalent ways, in ways which can subvert some of the ambitious arguments he adduces in discussing the "rationalization" of the modern world. Yet whether or not Kronman's interpretation elucidates Weber's confusion will be debated.

Much has been written about Weber's attempts to explain the relationship between law and economy, and Kronman's chapter on law and capitalism is disappointing: his discussion of causality and law and economics fails to understand Weber's appreciation of the importance of Marx's arguments. Kronman then takes us into interesting if slightly disjointed discussions of Weber's analyses of religion in general, and his anxious speculations of modern life and the unknowable implications of progressive developments. It is a pity that here David Little's useful work, *Religion, Order and Law* (1972) wasn't commented on.

The chief value of this book lies in the strenuous and careful attempts Kronman has made to dissect accurately some of Weber's works, to provide a useful guide to the reader's back discussions of selected subjects to the underpinning philosophical positions. Its merit is its lack of sociological "vision" - its failure to convey the ambitions, breadth and excitement of Weber's analyses.

While Kronman does not quite justify the claim by Jaspers that Weber is the "true philosopher of our age" he does help us to revise our attitudes to the philosophical issues that so perplexed Weber himself.

C. M. Campbell

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Max Weber

A plea of insanity

Madness and the Criminal Law
by Norval Morris
University of Chicago Press, £16.00
ISBN 0 226 53907 5

The relationship of criminal behaviour to abnormal states of mind continues to be a source of intellectual fascination for (among others) criminologists, psychiatrists, moral philosophers, sociologists, and legal scholars. One of the foundations of Anglo-American law is mens rea or guilty intent, but should that mens rea have been functioning normally, can guilt then be justly attributed?

Norval Morris, who is professor of law and criminology at Chicago, believes that when a given mental condition is required for an offence to have been committed, then in its absence there can be no conviction. Obvious enough, perhaps, but the next stage of his argument is that any disability which affects this intent should be given equal weight and this has not been the practice up to now. "Why," Morris asks, "should a special rule be made for the mentally ill if it is not available to other innocents?" - not only the blind, deaf, epileptic, or mentally retarded, but even more those who have been socially deprived, since social adversity is far more potent in its pressure towards criminality (certainly towards all forms of violence and street crime) than any psychotic condition. "The special defence of insanity excludes other powerful pressures on human behaviour, thus giving excessive weight to the psychological over the social."

To urge, as Morris does, that the special plea of insanity should be abolished may seem harsh and reactionary, but in his view, injustice and inefficiency always result from confusing the mental-health power of the state with its criminal-law power. In any case, since such defences are only invoked on rare and sensational occasions, much of the endless argument about them relates more to myth than to reality. Therefore, Morris would prefer to shift the discussion from fines to stand trial or the relevance of the insanity defence to questions of sentencing.

In this way, all whose criminal intent is less than normal may be treated fairly, and while evidence of mental illness should be admissible to show that the accused lacked the prohibited mens rea, so should evidence of other handicaps which might have a similar effect. Although it is constantly re-

affirmed that the denial of responsibility on grounds of mental illness must be maintained to preserve the moral infrastructure of the criminal law, "it is very much better to create a system which allows room for mercy and parsimony of punishment in the individual case".

Separating moral from criminal guilt would invalidate the reasoning which gave rise, for instance, to the McNaghten Rules, and Morris believes that medicine should never have been asked by judges to define the dividing line between guilt and innocence - "questions such as 'Did he know the act was wrong?' are philosophically in error", confusing the evidence for a proposition with the proposition itself.

To fact, since no criminal act is either wholly rational or altogether pathological determined, the moral issue sinks into the sands of real life; but will lawyers ever accept that this is so? Justice and humanity can only be maintained by giving the offender what he deserves as an individual (within a hierarchy of ranges of punishment), rather than merely the tariff for the crime, so that the issue then returns once more to sentencing, and to Morris's view that treating all like cases alike is by no means a categorical imperative.

This is a very unusual book indeed on the criminal law because two of its chapters are in the form of "lost" stories, written in Burrows by George Orwell. These are dramatic illustrations in one case of the gulf between two forms of guilt (moral and criminal), and in the other of the problem of how to judge the results of involuntary conduct, such as fugue states. It is an ingenious device, which captures well the feeling of such Orwell stories as "An execution", but falls down regretfully with its vocabulary: no Englishman of the 1920s would have written "testify", "short pants", "retarded", "talked with", and so on.

Apart from such infelicities, and occasional bits of legal jargon, this is a stimulating and provocative, yet humanely determined, series of arguments, concerned to rule out possibilities that the mentally ill criminal may get the worst of both worlds. Although practice on both sides of the Atlantic might be re-examined from this point of view, we may feel some modest satisfaction here that Professor Morris regards the Butler Report's recommendations as allowing more sophisticated powers of sentencing than any American legislation.

Hugh Freeman

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The force of numbers

Law and the Economy
by Roger Bowles
Martin Robertson, £16.50 and £6.95
ISBN 0 85520 465 6 and 474 5

There are a great many English legal scholars who are good at playing with rules and analysing cases and statutes with the traditional legal methodological toolkit. There are still comparatively few, however, who are capable of making a social sciences in their analysis of English law and institutions. As with sociology, so with economics: only recently has our legal literature begun to reflect a real, and certainly growing, interest in the application of the economist's methodology and core ideas to the study of law.

Roger Bowles's book is part of the effort now being made by a number of writers to explain how modern economics can be used to illuminate legal problems. He makes his attempt at a deliberately basic level, hoping to show that the theory of choice and the central ideas of economic analysis can be applied in a "fairly straightforward" way to legal issues. Mindful that the reader is likely to regard the other as "technical" or difficult, he works from the premise that the reader knows little about either subject.

His first four chapters provide an elementary introduction to economic analysis, to the economist's concepts of price and cost, and to methods of valuation. These matters are explained just so far as is necessary to make comprehensible to the non-economist the succeeding discussions of the economics of crime and punishment, and selected topics in tort, contract, litigation, legal services and the administration of justice, as well as the economic perspective on the concept of regulation. The author makes no claim to have written a comprehensive text; rather he has tried to draw together scattered scholarship and introduce it so as to whet the appetite for further reading, notes on which are most usefully appended to each chapter.

I suspect the typical legal reader may close the book without having all doubts about the extent of the utility of economic analysis of law dispelled. Although Bowles is admirably at pains to insert some appropriate caveats and qualifications and not to exaggerate the power of economic analysis, I think he could have confronted the lawyers' likely prejudices more boldly. The economist's methodology, with its unattractive picture of "economic man" is one that lawyers find hard to accept, thinking the models often so simplistic as to be dangerous when employed as tools of prediction and bases for policymaking, and unrealistically reliant on the accurate measurement of the essentially immeasurable. They object also to the isolation of the influence of variables which in the real world are inseparable in their impact.

Although the book is a fair success I suspect that better books (perhaps the second edition of this one) will soon displace it. I doubt whether those already well acquainted with law and economics will be detained by it; it is, in the author's own words, too low-brow and descriptive. As for the economist requiring an introduction to his discipline's contribution to legal thinking, I imagine he is more likely to start with the work of Posner or Hirschi, or the recently published volume edited by Burrows and Vejskovski, *The Economic Approach to Law*. However, for law students and lawyers who know all too little about economics I think this book will provide a most welcome introduction.

It is written in a very clear and easy style and it makes the bridges between the two disciplines, which the law student's "introduction to economics" course all too often fails to make.

John Rear

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BOOKS

States of magic

Paracelsus: an Introduction to Philosophical Medicine in the Era of the Renaissance (second edition)
by Walter Pagel
Karger, Wiley £43.50
ISBN 3 8055 3518 X
From Paracelsus to Newton: magic and the making of modern science
by Charles Webster
Cambridge University Press, £12.50
ISBN 0 521 24919 8

The fascination of Paracelsus, says the late Walter Pagel, is the way in which he "produced scientific results from a non-scientific world of notions and thoughts." This second edition of his admirably thorough and lucid study, first published in 1958, reproduces the original text and adds a substantial section taking account of recent work in the field - much of it by the author himself.

Pagel begins with a survey of Paracelsus's wanderings round sixteenth-century Europe, a painful cycle of enthusiastic welcome, followed by rapid cooling, confrontation with authority, and hasty flight. In religion faded, belief in magic or witches survived increasingly as part of a more general "conceptual infrastructure." While we must absorb Webster's findings on the importance of esotericism, the extent and the causes of change in the status of magic still need to be explained. Future investigators will have to ponder the fact that the scientists seem merely to have been "dragged along with the tide".

His medical teaching too is impossible to categorize simply. Pagel gives full weight to the progressive elements in Paracelsus's work in the early development of chemistry and in the understanding and treatment of disease. His fierce assault on long-established humoral doctrine had important consequences, as did his insistence on the specific nature (and especially chemical) therapy. At the same time Pagel states repeatedly that Paracelsus was not a scientist nor a systematic thinker, and that his writings were frequently both obscure and self-contradictory. The author is neither apologist nor debunker, winning rather to place the man and his work in the broader context of his medical and general philosophy.

At the heart of the book is an account of the Paracelsian theory of man's nature, an elaborate structure of correspondences between microcosm and macrocosm, and further chapters explore the complex theories of "elements" and chemical "principles". Finally, the author considers possible influences of Paracelsian thought, a daunting quest which reaches back to Hermeticism, Gnosticism, the Neoplatonists and the ubiquitous Abbot Joachim.

Charles Webster also begins his study with Paracelsus, and like Pagel he explores the wider "intellectual worlds" of his subjects. The book derives from a series of lectures given at Cambridge in 1981 in which he drew on his own research and on a number of recent works which have come to undermine many traditional assumptions about the scientific revolution.

Although it is unusual for Paracelsus and Newton to be mentioned in the same breath, Webster sets out to show that there was a large measure of continuity between them and marked similarities between the world-views of their respective contemporaries. He points out that Paracelsus, besides making progressive contributions in a number of fields, had a sceptical attitude towards popular judicial astrology and had little interest in contemporary notions of a pact between the devil and witches. In Newton's case, by contrast, modern elements in his thought have tended until recently to obliterate the Neoplatonic world which his mind continued to inhabit. Webster emphasizes the importance of a new perfect age in a reconstituted world: Newton's immersion in scriptural prophecy is well known, and was common in his circle.

Spiritual magic, a significant theme in Paracelsian writings, was important to Bacon's disciples and helped to shape the outlook of the early

Royal Society. The dream of unlocking the secrets of nature, and regaining the mastery possessed by Adam before the Fall, was explored fully by Webster himself some years ago in *The Great Instauration*. Newton's own fascination with alchemical literature is also familiar, and it has been suggested that he saw himself as a modern magus. Even in the case of demonic magic, Glanville's influential defence of belief in witchcraft is a reminder that the Royal Society was not unanimously on the side of "progress".

Webster is of course arguing a case, and Whiston, Glanville (and Newton) figure more prominently than the milder more sceptical Hooke, Flamsteed or Halley. To take a minor example, the views of William Lilly - an aged, popular astrologer-maker, born in 1602 - are cited in the text as evidence for the educated world-view around 1680, while Robert Hooke's total scepticism about astrology is assigned to a footnote. None the less, Webster's central case, for a remarkable degree of continuity, certainly carries conviction. (Does the tradition end with the Newtonians, or extend yet further?)

Webster accepts that change did take place, and that judicial astrology and witchcraft lost much of their standing in respectable opinion during this period. The magic and millenarianism of the Newtonians were very different in spirit (from that current 50 years earlier. As the sense of personal and everyday immediacy faded, belief in magic or witches survived increasingly as part of a more general "conceptual infrastructure." While we must absorb Webster's findings on the importance of esotericism, the extent and the causes of change in the status of magic still need to be explained. Future investigators will have to ponder the fact that the scientists seem merely to have been "dragged along with the tide".

Bernard Capp

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Vitalistic monism

Johann Baptista van Helmont: reformer of science and medicine
by Walter Pagel
Cambridge University Press, £20.00
ISBN 0 521 24867 8

Johann Baptista van Helmont (1597-1644) has outstanding claims to fame as a great pioneer of modern science and medicine. Even elementary texts mention the willow-tree experiment through which Helmont introduced quantitative reasoning into biological inquiry. He coined the word and concept of "gases" and has been called the "father of pneumatic chemistry".

His researches into the acid digestion of the stomach and emphasis on the role of fermentation have earned him a place among the founders of biochemistry. Histories of medicine honour him for his "ontological conception" of diseases, in place of the age-old belief in a single distemper caused by humoral imbalance. Add to this his death while under house-arrest on the orders of the Inquisition, and Helmont may seem like the very image of the heroic early-modern man of science, cast in the same mould as Galileo.

But secondary accounts which extol his achievements also usually caution against the stubborn "unmodern" elements he retained in his outlook. He accepted much from Paracelsus and apparently never shook off "the credulity and superstition" of his own time. The curious reader will be repelled not only by a complex Latin style but even more by ways of thinking difficult to reconcile with his "modernist" reputation. It may seem natural, then, to regard Helmont as a transitional figure, trying to get by on a mixture of old and new but never wholly advancing towards a modern science, held in the grip of a "medieval" past. Our gallery of transitional figures, however, becomes ever more crowded as closer historical acquaintance compels us to consign more



"Everything important, interesting or odd that has been written or painted, discovered or imagined, about the most extraordinary ancient building in the world", proclaims the front cover of *Stonehenge Complete* by Christopher Chippendale, published by Thames & Hudson at £12.50. James Barry's "King Lear mourning Cordelia", shown here, has Stonehenge as a background to the tragedy.

and more early-modern men of science died Helmont, and his notes are preserved among his manuscripts. Despite their differences, Newton and Leibniz were both well aware of the problems related to life and activity left unresolved by their mechanistic predecessors, and their common resort to Helmont is of great interest.

Pagel's profound study of the structure and detail of Helmont's thought is important and fundamental for understanding a seminal but bafflingly complex figure in the history of early-modern science and medicine.

P. M. Rattansi
P. M. Rattansi is professor of the history and philosophy of science at University College London.

Society of volunteers

The Royal Society and Its Fellows, 1660-1700; the morphology of an early scientific institution
by Michael Hunter
British Society for the History of Science Monographs. Halfpenny Furze, Mill Lane, Chalfont St Giles, Bucks HP8 4NR, £5.90
ISBN 0 906450 03 9

Reading this study of the first 50 fellows of the Royal Society, one quickly realizes that the history of scientific innovation and the history of the Royal Society and its membership, though related topics, are far from identical ones.

What was it to be an "active scientist" in late seventeenth-century terms? There is no simple answer. Few would deny that Isaac Newton had proved himself an "active scientist" before 1700, but as 290th fellow of the Royal Society he had so far been only "slightly active" and a correspondent. Being exempted from the society's dues, he did not even support it financially. By contrast, many fellows whose names are now unknown even to expert historians were, at least for short periods, energetic in the society's affairs, regular attenders at meetings, and eager propagandists on its behalf.

Such a double standard of activity is, of course, paralleled by a double image of what an institution such as the Royal Society ought to be. Should it be a Salomon's House, a place where research is conducted and where new discoveries are demonstrated, an institute in modern terms, or should it be a place where scientific work is reported, disseminated, and by at least silent approval validated? There can be no doubt that the former image was the prevalent one among the founders of the Royal Society and the one aimed at in practice during the 1660s; but it is no less clear that the society ultimately moulded itself to the second image. The transition from one to the other is to some extent reflected

in the history of the membership and composition of the society. Michael Hunter has studied these matters more minutely than any predecessor. He has identified all the early fellows for whom identification is possible, including that very large proportion who were fellows in only a titular sense - Ralph Cudworth, the great Cambridge philosopher, Master of Christ's College, for example. He has assessed the interest of each fellow in the society's concerns through the years, and the ups and downs of numbers. No nineteenth-century distinction between "amateurs" and "professionals" is relevant here; what matters in the institutional history of the society is whether a man consistently gave time, money and intellectual energy to it.

As Hunter shows, one core of such fellows kept the society just on its feet from 1660 to the "palace revolution" of 1677-79; then, following the Hooke interregnum, a second core established itself from about 1682, with Hans Sloane ultimately as its leading figure. The chief problem in the society's evolution was the maintenance of the viability of this core, and the provision of the barest finance (for 1696-1700 the society's average annual expenditure was £1,100 as compared with £333 in 1667-70). Many men would gladly sign their names to the society's book, but few would pay for the privilege; the yield of subscriptions in 1692 was £38. Finance alone destroyed the first image of the Royal Society.

Hunter's lists and tables, and his introductory chapters, set out in great detail the "natural history" of the 550 fellows considered. The present volume is a "second edition" in the sense that a first presentation of the same study was published in *Notes and Records of the Royal Society* in 1976. This "monograph" form of publication from camera-ready typescript with unjustified lines is adequate and correct, though the full pages of small print are trying to the eyes. As an amplified and corrected work of reference, however, Hunter's study will surely remain authoritative for very many years.

Rupert Hall

Rupert Hall was formerly professor of the history of science and technology at Imperial College, London.

THE SCIENTIFIC CONSENSUS AND RECENT BRITISH PHILOSOPHY

by Frans Mahe
Presents the reflection of the Structured Self as contrasted by the original papers of JULIAN HUXLEY, R. WOLLHEIM, F. S. NARRI etc. Available from: Foyles and Kama Bookshop, London Mandrake, Nr. Harvard, Cambridge, USA (and summaries) Popular Prakashan, 35C Tardoo Road, Bombay, India.

BOOKS

Necessary rigour

Mathematics for Computing
by G. P. McKeown
and V. J. Rayward-Smith
Macmillan, £18.00 and £8.95
ISBN 0 333 291 69 7 and 700

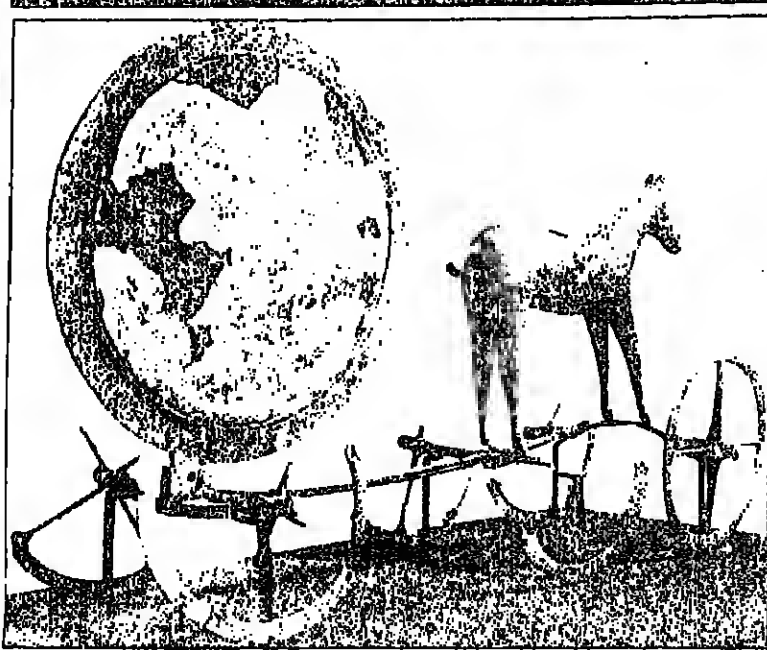
The problems associated with the teaching of relevant mathematics to students of computing are far from straightforward. At one extreme people will argue that advanced mathematics is almost irrelevant; thus courses in computing for non-mathematical students are a realistic possibility. Such people will not deny that rigorous and logical thinking are desirable and that these are valuable attributes to be sought in any serious computing specialist. However, they will argue that the necessary rigour can be taught through an appropriate treatment of computer science topics. At the other extreme an argument can be made that computing is mathematics and mathematics is a way of life. What else need be said? As usual the truth lies somewhere in the middle.

Many computer science courses are geared to accept only numerical environments, and their designers insist on providing mathematics courses to accompany and support the computing element. What should these mathematics courses contain and who should do the teaching? Are traditional mathematics courses appropriate? Do mathematicians appreciate the relevance of mathematics, mathematical logic and mathematical thinking, not to the more obvious areas of numerical analysis, statistics and operational research, but to programming of all kinds? Can they provide the necessary motivation and the necessary emphasis?

The publication of *Mathematics for Computing* is an interesting and useful addition to the literature and to the debate. In preparing their book the authors (lecturers in the school of computing studies and accountancy in the University of East Anglia) claim to have studied the mathematics requirements in courses in computer science and allied subjects. The book contains an initial foundation chapter that covers propositional logic, set theory, numbers and functions. Later chapters delve into aspects of linear algebra, calculus, probability theory and algebraic structures such as relations, graphs, groups, rings and algebras.

By way of comparison, a syllabus for an "engineering-style" course in computer science has recently been produced by a working party of the Inter-University Committee on Computing. This contained mention of the appropriate mathematics and like many other studies, concluded that there should be an emphasis on discrete mathematics. However, syllabuses such as these tend to ignore the fact that there are other considerations in designing courses, for example, that students should be able to transfer to other related courses; moreover, many computing courses still have a substantial numerical analysis content. The converse of this argument merits close examination: mathematics courses taken by computer science students in the early years may not exactly reflect the mathematics needed for computing.

Within the book itself there is the occasional mention of computing and computing application. The authors have employed algorithms and this is surely valuable. If I wished to be critical, I might remark that the computing emphasis has been underdone. I would like to have seen the authors justify from the viewpoint of the computer scientist the inclusion of topics such as groups and semigroups. I also feel that computer scientists should be made to realize the fundamental importance and the practical benefits of such processes as abstraction and axiomatization. Had these steps been taken, the book might have given mathematics lecturers a valuable insight into computing and computing students might have been more highly motivated in their mathematical studies. These considerations are vital since they are fundamental to such



Six-wheeled carriage with horse and gilded "sun-disc", a bronze of the thirteenth century from Trundholm, Denmark. Taken from *The Earliest Wheeled Transport: from the Atlantic coast to the Caspian Sea* by Stuart Piggott, published by Thames & Hudson at £20.00. Primarily a technological study, the book ranges over the whole of Europe and western Russia and from the beginnings more than 5,000 years ago to the impact of Rome in the last centuries BC. Professor Piggott's detailed analysis of archaeological remains enables him to build up a sequence from disc to spoked to iron-tired wheel, and from ox-drawn cart and wagon to horse-drawn carriage and chariot.

topics as the theory of computer science but also in more practical areas such as software engineering, database work, expert systems, artificial intelligence, program analysis and verification, simulation, modelling and VLSI (very large scale integration) design.

A. D. McGettrick

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Real life problems

Applying Mathematics: a course in mathematical modelling
by D. N. Burghes, I. Huntley
and J. McDonald
Ellis Horwood: Wiley,
£16.50 and £6.50
ISBN 0 85312 417 5 and 456 6

During the past few decades there have been many books describing the application of mathematics to non-traditional areas such as biology, geography and medicine. More recently books have appeared solely devoted to the theme of mathematical modelling. *Applying Mathematics* falls into the latter category, although rather than merely explaining previously constructed models, more emphasis than usual is placed on helping the reader to formulate a model from a real life problem.

Perhaps reader is a misnomer; participation would be a better description. In order to benefit fully, he is expected to work quite hard. He not only needs pencil and paper and some mathematical ability, but also time enough to develop his own original ideas of how to tackle the many problems set. As the authors emphasize, this participation is crucial to the success of the book, reasoning that the greater variety of real life problems one has to provide a mathematical formulation for, the more proficient one ought to become at modelling. In fact, unlike more traditional mathematical texts, the problems or exercises form the major source of teaching material. The reader is encouraged to formulate his own models and then compare them with the two or three suggested by the authors.

The book is divided into four parts. The first describes how mathematical modelling has helped to provide solutions to three practical problems. These are calculating safe separation distances for aircraft crossing the North Atlantic, estimating the effects of harvesting white populations, and determining the age of King Arthur's table at Winchester.

Part two consists of twenty examples for the reader to attempt to model. These range from forestry management to maximizing the traffic flow through a tunnel. The reader is strongly encouraged to try some

solutions for himself, although possible ones are near at hand. I hope that many readers are strong-willed enough not to peep. The interesting example entitled "Miracle at Mexico City" asks whether Bob Beamon's fantastic long jump of 8.90 metres at the 1968 Olympic Games in Mexico City was in any way due to the high altitude of Mexico City. Several formulations of the problem are provided but they all reach the same conclusion - that altitude was an insignificant factor and that the best explanation of this phenomenal jump was that "everything went just right on the day".

The third part is concerned with the philosophy of model building, illustrating the now classical modelling cycle by two examples. One quibble here is that new situations are introduced rather than taking them from part two. Some confusion may occur while the modeller is attempting to understand both a new model and the concept of the modelling cycle. The final part consists of a further 20 problems to be explored. No solutions are provided but we are directed to other sources for them.

It is hard to describe the level of mathematics used, although someone with a good grade in A level mathematics should be able to understand most of the solutions. However, the ability to use mathematics in real situations usually comes with a maturity beyond this, a maturity that develops through the constant application of mathematics.

Overall, the book is well written and has the advantage that it can be easily dipped into. It provides a useful basis for undergraduate courses in mathematical modelling, and should also appeal to both those who already construct mathematical models and those who wish to do so.

C. D. Litton

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Concept of arousal

Attention and Arousal: cognition and performance
by Michael W. Eysenck
Springer, DM78
ISBN 3 540 11338 3

This latest product from the Eysenck dynasty is an odd book in a number of ways. Although the summaries of research which it contains are useful, the book is presented in a context which can only confuse the reader.

The discussions involve the effects of arousal on selective attention, and on performance in general. Along the route we are introduced to contemporary theories of attention and arousal, and to empirical research on the effects upon performance of such

factors as incentives and noise. The role of introversion-extraversion is (inevitably) emphasized in this catalogue of the interactions between factors which are considered to influence arousal. The inventory itself is useful, and many an undergraduate will be grateful for it, but the introductory remarks create expectations which are not fulfilled.

Dr Eysenck first declares that the current involvement with cognition is one of psychology's "passing fads and fancies" which has never "addressed all of the appropriate issues". The alleged failure is that we have excluded from our thoughts any consideration of motivational and emotional issues. The cognitive system is said to be artificially narrow in this respect, and our omission has resulted in a conception of a single-minded system possessing unity of purpose. Eysenck then proceeds to broaden the scope of our considerations, largely by reference to existing work in the literature on cognition. This inconsistency is puzzling, for if the investigation of cognition is a whim soon to be relegated to the history books, why is there so much concern here for the development of the approach?

A further problem is with the introductory promise to consider "the dynamic interrelationships among motivation, emotion, and cognition". What this boils down to is a discussion of arousal. Not only is this a particularly narrow definition of motivation and emotion, but the concept of arousal is elusive, and tends to be defined in terms of the factors which affect it. Occasional mention is made of the physiological correlates of arousal, but this approach to the definition is never developed, and in any case is ambiguous in isolation.

One such correlate is pupil dilation, but entering a dark room will also have this effect as the eyes adapt to the dark - is increased arousal implicated in this situation also? Clearly not (or at least, not always). What makes matters worse is the very weak correlation between the different physiological measures of arousal. Eysenck attempts to circumvent this difficulty by relying on the observable influences on performance of such factors as sleep deprivation, noise, time-of-day, and incentive.

What then is arousal? The answer seems to be that arousal is that which is affected by manipulations such as increased noise, and this circularity suggests a similarity between the problems of defining the two concepts of intelligence and arousal. Eysenck also sees an analogy between these two areas, and suggests that low correlations between the effects of different arousing agents should be interpreted in terms of a general arousal system, and with differences between effects resulting from the operation of additional specific mechanisms and processes. Similar remarks have been made about general and specific intelligence, also in an attempt to account for low correlations.

The concise summaries of a handful of contemporary views of attention are less contentious. Eysenck dispenses with perceptual selection and response-selection views of attention in a short historical review, and summarizes his register of theories with the suggestion that attention can facilitate processing at almost any stage of information processing. It would have improved the strength of this observation to have isolated a number of potential stages with demonstrations of attentional limitations at each one.

Some readers will also be unhappy with Eysenck's use of the concept of automatization, the quality which is associated with attention-free performance. Although the debate is not entered in this book, it is possible to define an automatic act as a programmed response to an environmental calling-pattern. Eysenck's preference is to rely on the notion of a hierarchy of processes, with automatic acts being located at the bottom of the hierarchy. The explanatory power of this re-description is not, however, entirely clear, and the notion does not readily offer themselves.

Geoffrey Underwood

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Plant ecology

Introduction to Plant Population Ecology
by Jonathan W. Silvertown
Longman, £7.95
ISBN 0 582 4125 6

The broad field of plant ecology encompasses many traditions, including an emerging discipline of plant population ecology. Practitioners of this subject are recognized by their tendency to spend much of their lives prostrate on the ground, taking meticulous observations on the births and deaths of individual plants, for, although such events are generally inconspicuous, they are critical to the dynamics of Nature. It is the relative magnitude of birth and death rates that is immediately responsible for outbreaks and extinctions of species. And, of particular importance, it is the genetic differences in birth and death rates that constitute the essence of natural selection - a process as hard to measure as it is crucial to Nature.

Jonathan Silvertown's book is the first of several we can expect to see in the next few years intended as introductions for students to this fast-growing field. The book begins with an introduction to age-specific and size-specific birth and death rates - the foundations of population ecology. From here, he takes us immediately into a set of case-studies, to demonstrate some of the information emerging from this kind of study.

Risk of death and rate of reproduction are often not independent, because a plant diverting its resources to reproduction does so at the cost of less resources for growth and maintenance. Thus, the next chapter considers the compromises that have been reached between births and deaths in different plant species growing in contrasting environments. He then follows a familiar path from interactions within species, through the experimental analysis of interactions between pairs of plant species, to the effect of between-species interactions on community structure. En route, he stops to discuss the complications arising from the capacity of many plants for indefinite clonal growth.

The author has a clear and engaging style of writing, which, to my mind, captures well the excitement of the subject. As he has gone to some trouble to keep mathematical formalism to a minimum, the book will be readily understood by those with little background in mathematics. Also, as the blend of subject-matter, necessarily been carefully chosen to reflect the current interests of plant population ecologists, the reader should get a good impression of the issues now providing the motivation for this kind of work.

There are, however, some significant omissions. For example, the reader might be excused for concluding that pathogens have no effect on births and deaths of plants, and that herbivores have little effect. Furthermore, mutualism, a crucial force unrecognized by generations of ecologists, is mentioned only in passing.

Volume four of *The Filamentous Fungi*, entitled *Fungal Technology* and edited by J. E. Smith, D. R. Berry and B. Kristiansen is devoted to the biotechnological applications of filamentous fungi. The volume is available from Edward Arnold at £32.50.

Papers presented at a conference entitled *Evolution of Molecules and Men*, organized by Darwin College in 1982, have been edited by D. S. Bendall and published by Cambridge University Press at £18.00. The 26 papers have been organized into four groups: evolutionary history; molecular and cellular evolution; evolution of whole organisms; and evolution of social behaviour. Sir Andrew Huxley provides the prologue and John Passmore the epilogue.

education for employment



Catering for the clientele

Jack Mansell starts our special supplement on education for employment with a look at existing provision and where it can be improved

With only about half our adult population in full-time employment, educating for employment has to be put into that perspective. Most people need employment for some part of their life; it is the major determinant of how and where we live, and it accounts for much of our status in life. On the other hand, except for a fortunate minority, employment is often either competitive, boring, dirty, dangerous, stressful - or a combination of those things.

Much the same applies to work, which may or may not be paid employment; and life in general. There are many, especially the handicapped, who will be unlikely to get employment. Hopefully, they will be encouraged to work, that is to do useful and purposeful things. These distinctions between employment, work and life are not new and they are frequently used negatively. One can still detect the vestiges of separate education systems for boys (potential employees), girls (potential mothers) and for the handicapped (potential dependents?). Some progress has been made, and integration is now rarely openly opposed. Used positively, the distinctions can be used to justify a balanced education, so that all have the right to be educated for employment, work and life in general.

For many, the age of 16 is a time to choose between education and employment, and as a nation we have conditioned a large proportion of our workforce to regard education as alternative to employment rather than as a complementary activity. Thus only a small élite of the working class, the apprentices, have received further education as of right. Many would maintain that the price we pay for this isolation of continuing and further education from employment is a workforce with no great enthusiasm for education.

Notwithstanding its obvious vocational nature, further education also remains dominated by levels of work based on the trappings of academic excellence. In further education, however, it is easy to see that the number of conventional apprentices has dramatically decreased, especially those in the manufacturing industry, and they are being replaced by an increasing number of full-time pre-vocational students. Many of these changes are irreversible, and with about one or two of school-leavers unemployed, there is now a significant similarity between the ratio of young people out of school now engaged in full employment.

This, as was noted above, relates to the reality of educating for employment. Many would maintain that it is now as much a matter of geographical accident as ability, as to whether school-leavers find themselves remaining in full-time education, on a Youth Training Scheme as unemployed, or in employment. Because of this the Further Education Unit would maintain that all young people should have similar curricular opportunities. From this it has evolved a "generic" concept of vocational preparation having as its aims the right to acquire basic skills; assistance in assessing self-potential; opportunities in particular. The extent to

which this is justified is not always rationally debated; some would maintain that the schools' preoccupation with "academic" examinations and the selection, grading and "failure" that stems from that, has been a contribution to the apparent "allergy" of many working class people to more education.

Vocationally oriented education was, and is, of lower priority than academic education. "Instructors" are graded and trained at a level lower than "teachers". Written work is valued more than practical work and content is rewarded more than experience. Much of this is related to the relative ease with which "academic", classroom work can be organized, assessed and rewarded compared to practical and experiential based learning. The aims of the new Technical and Vocational Education Initiative are obviously designed to change some of the schools' curricular thinking, but this academic bias would not survive if it were not so well supported by society: by employers, by parents and by the teaching profession itself.

and with this the optimization of personal employability; and the development of an understanding of adult society.

Such aims are not exclusive to further education or indeed to young people, but many would maintain that these aims should also be the framework of the 14-18 curricula. They are implied in the New Training Initiative. All this is fine provided they are given pride of place and not regarded as optional extras to be fitted around a dominant single-subject examination system. Vocational preparation, as defined above, with its emphasis on guidance and counselling, formative assess-

ment, (planned) experiential learning and individually negotiated programmes, is related to adult life, including work and employment. To ensure the centrality of these curricular components there has to be a "compulsory" core, against which each young person has the right to be checked. Such a core need not be exclusive of more specialized learning, whether academic or vocational. Indeed, the need to design within a national framework is recognized in the new 17+ and has long been mooted by the FEU, but what we are discussing is not only balance but mastery.

Employers rarely complain about lack of content in young people; they frequently complain about the lack of mastery in basic skills that apparently inhibits the transfer of competence from school or college learning to day-to-day work.

Employers rarely complain about lack of content in young people; they frequently complain about the lack of mastery in basic skills that apparently inhibits the transfer of competence from school or college learning to day-to-day work. This tends to imply a lack of planned experience. Thus we have often grossly exaggerated accusations made against the unreality of education. The end result is the VTS which, with its employer-based philosophy contributes significantly to a non-role for education related to employment. Only learning in the work situation is real, relevant and worthwhile... work-based assignments are good, classroom learning is bad... education-driven learning is teacher-centred, motivating and useful... and so on.

Of course it is an unnecessary polarization, but as always examples can be found which appear to prove

continued on page 20

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WIGAN COLLEGE OF TECHNOLOGY MANAGEMENT CENTRE

How Wearside College accepted a challenge

by Alan Cuss

Wearside College has long recognized that in Sunderland unemployment is not a short term problem. Some areas of the town now have a 50 per cent unemployment rate and, for young school-leavers, employment is a luxury to be experienced only by the privileged few. About 3,500 young people will be leaving school this year in Sunderland and most of these will have to be accommodated on the Government's Youth Training Scheme.

The college was established to provide further education support for local industry. As the industrial base has disintegrated, it has been necessary to review the organizational framework and decide how the college could best respond to this new challenge. Redeployment of resources took several years and the college was able to reflect on and reassess the new and demanding role which it would have to undertake. Other colleges may find themselves making this transition over a much shorter time.

Youth Opportunities work in the college between 1978 and 1980 represented about 12 per cent of the work of the college. In 1980, the Secretary for State for Employment invited Sunderland local authority to participate in an Exemplary Project. Wearside College's contribution provided 260 placements each term and increased the YOP work to about 20 per cent of the total college provision. The authority recognized the shortage of work placements in the area and put forward a very imaginative approach using both of the colleges of further education in the town and offering the opportunity for a one year training programme of college-based tuition and matched work experience.

The programme design elements include: induction; occupationally-based training; up to 26 weeks off-the-job training and education; core skills; guidance and counselling; assessment; profiling; matched work experience. These design elements compare very closely with the design elements of the Youth Training Scheme.

In reviewing the college's provision for coping with the Exemplary Project, it was recognized that a greater number of lower ability youngsters would be coming into the programme. Several important changes had to be made to the provision. Experience of the Youth Opportunities Programme indicated that a long-term solution could not be provided by a series of courses. Each period of study had to be unique, in part at least, to each individual and the college had to develop a supportive framework of personal development and counselling.

Staff needed to be aware of what was being done in other areas of the Youth Opportunities Programme. External liaison procedures had to be reviewed. Experience showed that it could be counterproductive to have too many staff discussing schemes and student performance with Manpower Services Commission officers and careers staff. It was necessary to reinforce certain areas within the college to strengthen the curriculum development team and provide the essential supportive framework within the college. Programmes had to be made more flexible to take account of the needs of the individual. It was important to ensure that the needs of departments did not dictate the provision for the individual and a departmental restructuring was carried out to provide a more effective coordinated approach to vocational preparation within the college.

The curriculum development team worked closely with the staff development committee and a very ambitious staff training programme was introduced. Staff cooperation in the process of change and the organizational health of the institution were important factors and the staff development programme proved to be very effective. Supervising staff that they might have to reassess their teaching strategies. The need to move from a tutor-centred approach to a trainee-centred approach was readily accepted and staff enthusiastically embarked on a series of curriculum exercises to provide a number of learning packages which would meet the criteria laid down in the MSC Youth Training Scheme guidelines.

In assessing the movement from YOP to YTS, it is interesting to note that the Youth Task Group report stated: "The task is one of taking what is relevant from the present and making it available more widely". It is, therefore, sad to reflect that, having developed the design elements for the Exemplary Project, largely to replace the shortfall in work experience placements, we now have a Youth Training Scheme which makes even greater demands on work placements. The new managing agencies may not be aware of what further education can offer. In many cases they may not want to use the further education service at all. Wearside College recognizes that individual trainees and sponsors' needs will make new curriculum demands.

Through the experience of the Exemplary Project, the college has arranged its resources into a series of packages which can be selected to suit individual programmes. Each of the programmes has been designed to fulfil the requirements of the MSC guidelines in providing occupationally based training and education and using assignments which attempt to integrate core skills with work-based learning. The college is now in a position to offer an *a la carte* curriculum menu to the newly emerging agencies. We are, however, having to redress our shop window but, as any good retailer knows, it is not just the quality that is important but the price of the goods on display. I am, therefore, deeply concerned that this may persuade MSC to look at inferior quality goods.

There is no doubt in my mind that the Youth Training Scheme has to be made to work and I hope that colleges will be invited to play a major part. For many, further education would appear to offer the only immediate progression route and yet I am disappointed at the number of schemes being accepted without any FE links. Further education is not mandatory and many may argue that it should not be. I would have hoped to see trainees given the right to it if they felt they could benefit. The MSC funding to managing agencies puts the decision into a financial debate and leaves the decision up to the managing agency and not the individual trainee.

The Youth Training Scheme provision in the Sunderland area will be different from the national pattern. There will be greater emphasis on Mode B schemes and the Mode B1 schemes are tending to make themselves self-sufficient. Further education is, therefore, required for only minimal support in many schemes, and for how long?

So much of the new scheme depends on the quality of the instructor. It will be very job, in running an accredited centre for staff development, to develop these trainers and assist the MSC Quality Team. The present system does not appear to provide the area boards with enough control on the selection of trainers taken on by managing agencies. Staff development can only do so much and it seems unrealistic that trainers may be selected without essential skills. My impression is that the accredited centres will more than have their work cut out.

In the Sunderland area, very few schemes offer meaningful opportunities for the more able school leaver. The MSC discussion paper, *Towards an Adult Training Strategy*, stressed that major changes in the labour market have already made themselves sharply felt and that, while unskilled and manual jobs have declined, there is likely to be a growing demand for people with technical and professional skills. MSC officers in parts of the North East have it difficult task in



finds schemes which can generate a foundation base for technicians. Where, I ask, will the next generation of technicians come from in Sunderland?

The further education service has been criticized by MSC for failing to respond to provide a new and realistic curriculum for young unemployed school leavers. Experience at Wearside College has shown that colleges can respond, given time, resources and a degree of permanence. It is difficult for colleges to redirect resources into areas which offer no long term guarantees. There is no doubt about the need for a higher quality training programme for young people, but it remains to be seen if agencies outside the further education service can deliver the quality required for long term progression.

The Youth Training Scheme has been initiated to provide a real training foundation for employment. I hope that it will be appreciated that there are particular problems in introducing an employer-based initiative in an area where employers are becoming very thin on the ground.

The author is principal of Wearside College of Further Education.

Catering for the clientele

continued from page 19

the case. To argue against these accusations is a complex and demanding business; and perhaps it should be? But few employers, or politicians, are able to find the time to discuss the value of personal development, the development of talent other than workplace skills, the appreciation of other cultures and the inculcation of political and economic literacy.

To explain these things requires the vocabulary of curriculum development: aims, objective, assessment, profiling... and like most jargon it is unwelcome and is seen as another example of the way education cannot relate to the real world (of employment). To make matters worse, the education system is now having to deal with someone else's jargon: trainee-centred learning, process business, occupational training, families, skill ownership... Much of the interpretation of which deliberately supports the polarization referred to above. This is a pity, because there are plenty of good examples to show that a suitable mix of education, training and work experience not only provides a gateway to work and adult society, but also increases the mutual respect of the partners who provide the mix. Negotiated curricula are not only about agreed contracts between teachers and learners, it is also about contracts between providers.

In the context of the above, what should education for employment mean to the education system? Primarily it should mean that as a particular form of work and a part of life in general, employment must be recognized as a central aim of the educational process and not something which is not quite respectable. The corollary of this recognition is that the education system must help to prepare all for employment, work and life; not just those whose talents are best matched to the present examination system.

It also means that employment has to be put not only in the context of wealth creation but also in the context of unemployment. And if this is to be a particular form of work and a part of life generally is to be a central aim of the curriculum, then further education has to widen its clientele as well as broaden its base.

requires a better understanding of the nature of the generation of profit, employment, the quality of work, the need for a flexible work force, the possibility of unemployment and of the consequent responsibility of society - so be it. It follows from this that assessment, guidance and support must be related as much to employment and unemployment as to academic progression; and these processes must be regarded as an essential part of the curriculum. It also follows that with an uncertain employment prospect, employment must be education for as much choice as possible. Any education or training system that reduces choice is illiberal.

What this means in practice is a broad-based curriculum, and the (in)active demand of many employers to have available at the age of 16 a stock of specifically trained labour or jobs which may not exist, must be resisted; if necessary by using data related to employment and unemployment. The corollary of this is that both schools and colleges must be prepared to regard competence and experience in a wide range of basic skills, as an essential part of a core curriculum to which everyone is entitled.

The definition of basic skills is or should be, a dynamic one: skills are not the prerogative of apprenticeship or indeed of employment. For example, computer literacy is now recognized as part of the parcel of basic skills, yet few vocational syllabuses include it as a compulsory element. The teaching of new skills as well as (necessary) old skills, requires a constant re-appraisal of content and method.

If education for employment as a particular form of work and a part of life generally is to be a central aim of the curriculum then further education has to widen its clientele as well as broaden its base. Statistically, there must be more employment opportunities outside the conventional apprenticeship system than within it. Colleges ignoring this fact will finish up with a diminishing run of traditional vocationally specific education.

However, if we are to relate (not restrict) education to employment, then further education has to be allowed to relate to the whole spectrum of employment and not just to a part of it. This may well mean very small groups in some diminishing but essential skills. It also means the creation of non-traditional curricula for non-traditional clientele. It seems inconceivable that there should not be an expanding demand for more education as the volatility of employment and the use of new technology increase. Relating to employment includes relating to unemployment and to obsolescent skills when they occur.

It may well be that society at the moment is not very supportive of small (ie uneconomic) learning groups, but if the employment data indicates that only four meta-industrial engineering apprentices are required in the locality that year, then such groups must be supported not merely tolerated. Similarly if, say 4,000 adults are suddenly made redundant from a local firm, then the education system must be given its share of the resources necessary to "rehabilitate" those people. Similar situations exist with respect to blacks, handicapped and many women - all of which are faced with problems of employment.

Educational technology, with its opportunities for open and distance learning, will be able to solve some of these problems, but by no means all. The message then is relatively clear: if the education system is to relate to employment then it will have to change many of its priorities, processes and methods. The *guido* quo should be a more enlightened way of defining education for employment and a more continuous and comprehensive provision than exists at the moment.

Within this provision the education system will have to work as a partner with other agencies, be prepared to use their vocabularies and, sometimes, their money. Only survival if it is based on mutual respect and stability rather than on threat of annihilation and eroded fuel.

The author is chief officer of the Further Education Unit.

Adults: the poor relations for too long

by Jenny Bacon

During the coming months the Manpower Services Commission will be preparing something this country has long needed - a fresh approach to adult training.

In doing so, the commission will draw upon the experience and views of many interested parties, put forward in response to an MSC discussion document, *Towards an Adult Training Strategy*, published in April this year. The views are still coming in, but one thing is clear - they feel, as we do, that adult training and retraining has been the poor relation for too long.

This accord with objective three of the MSC's New Training Initiative, contained in our *Agenda for Action*, published in December 1981 to "open up widespread opportunities for adults, whether employed, unemployed or returning to work, to acquire, increase or update their skills and knowledge during the course of their working lives".

The publication of this year's discussion document was a step towards achieving this goal.

A strategy to implement objective three must complement action on the other two NTI objectives. We are aiming for vocational education and training framework which, overall:

- offers young people entering the labour market a proper foundation training to equip them with the bases of working life, the capacity to go on learning, and essential transferable skills on to which specific skills can be added throughout their working lives;
- enables people to enter the labour market at any age, with different education and experience backgrounds; to have (further) education and experience taken into account in the foundation training they undertake;
- enables those in the labour market, to undertake further training or retraining as and when necessary, which builds upon and reflects their previous skills, knowledge and experience, and results in testable levels of competence recognized by employers.

What happens in the labour market must condition the aims of the training system. Relevant factors include major and continuing structural changes often radical, in industries and occupations, enhanced by more widespread use of new technologies; change in the nature of skills required (eg more jobs requiring diagnostic and process skills, technical knowledge) and continuing high levels of unemployment.

This calls for a training system with capacity to respond rapidly and to deal with the unpredictable. It must be able to encompass a sea change in vocational education and training, if for the future we are to become a "nation of technicians".

In the short to medium term, the system will need to help the present labour force to adapt, to match the emerging structure of employment and changing demand for skills. This means more provision of updating and upgrading training for a wider range and larger number of people. Over a longer timescale, the system will need to provide people coming in to the labour force with a better foundation of skills and knowledge particularly technical skills to enable them to go on learning and to cope with change. This may require changes in the foundation education and initial training systems. The system will also need to offer different ways of helping the unemployed people to keep in touch with the labour market, develop general work competences not necessarily related to employment, and to deal with the realities of unemployment.

We are therefore looking for a system which is coherent (not least in its links back into the education system) with some common objectives for all providers of and addressees upon adult training and education. It needs to be adaptable, and responsive to the needs of employers and individuals. Training offered under it needs to be based upon sound labour market intelligence, to be attractive and accessible to its clients, and relevant to employment needs. In the

interests of economic regeneration and of making our workforce competitive, it needs to be employment-driven, in terms of objectives and what providers respond to. But the demands upon it are greater than the sum of individual employers' needs. The expectations of individuals, including the unemployed and self-employed, overall management of the economy and the links with education must also shape the system.

A system with the characteristics outlined above cannot be the exclusive property of any one component in it. The first issue an adult training strategy needs to address is whether it is possible to get some common ownership of the problems to be tackled. We are therefore working for:

- widespread recognition, by the clients of adult training and its providers, that adult training and retraining is essential to cope with economic change and future demands;
- agreement on policy objectives that are coherent and mutually consistent;
- some marshalling of all the resources at present used for adult education and training behind common objectives;

● an integrated approach to standard-setting and assessment of competence which reflects labour market needs and helps proper progression from education, foundation and initial training into continuing education and retraining;

● improving and sharing information about what training needs to be done, and what is available, for dissemination among the providers and clients of the system.

This is not a job for the MSC alone - far from it. There are many areas in which cooperation and agreement with others, and leadership by them, will be essential. Above all, much greater collaboration between MSC and the educational world is needed to make a strategy work and to place responsibilities in the right places. The MSC could of course plough its own furrow. But such an approach would be neither strategic nor optimal: it would not resolve the problems we believe exist.

That said, the MSC's own programmes for adult training need adjustment to reflect labour market demands and developments on the other NTI objectives. We can make no assumptions about new resources

coming available for adults, but must consider whether we can do different things in different ways with what we have - around £260m in 1984/85 for all our adult training programmes including the Training Opportunities Scheme, grant schemes to employers and the Open Tech.

We shall be looking at the economic relevance of our programmes, especially the TOPS, and how to improve their responsiveness to local employment needs; to support innovative training methods - by extending the Open Tech and otherwise; to improve access to training; and to explore different ways of helping the unemployed. In particular, we are being urged to consider such possibilities as:

- collaborative projects at community level, involving joint funding by the MSC and others interested, to mobilize local resources in tackling employment problems and developments to which education, training and retraining for adults can contribute;
- development of information on local labour markets and training providers;
- linking relevant parts of the TOPS training and the Community Programmes into "work preparation" offerings for unemployed people;

Well, it all started when we decided to train the trainers... obviously one then had to train people to do that, which meant training people to train the trainers' trainers and so on until EVERYONE had a job in training!



However, whatever the MSC does will be only a small part of what needs to be done. Ideas about what others in the education and training world can do, and more important, willingness to collaborate in developing and implementing a coherent strategy, is what we hope will come out of the consultations.

The author is director of occupational training at the Manpower Services Commission.

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education for employment

by Leiston Fullick

While the Youth Training Scheme, whatever its merits or demerits, is recognised as a radical departure in training for youth involving half a million young people and having major implications for education, industrial relations and the structure of the economy generally, the MSC's consultative document *Towards an Adult Training Strategy* promises much less for those who have been looking for a similar development in adult training.

Objective III of the New Training Initiative called for the opening up of widespread opportunities for adults whether employed, unemployed or returning to work to acquire, increase or update their skills and knowledge during their working lives. It was an objective more or less heavily endorsed by all those in the education service concerned with the teaching of adults. Adult education broadly defined does incidentally command a surprising stable chunk of the post-school budget. The DES estimates it spent £275m on the education of adults in 1982-83. Also, the MSC's document represents a considerable narrowing of focus with regard to the implementation of Objective III and it is a focus that has progressively narrowed with each draft of the strategy that has been leaked over the last month.

It would be difficult to quarrel with the general proposition of the document that there is an urgent need for a new approach to adult training in this country. It pinpoints very well a number of general issues and problems with regard to changes in the structure of the economy, the definition of skill in our workforce and the broader needs of individuals for personal develop-

Call for a change of approach

ment in their working lives. It gives due recognition to some of the marked inequalities in our society - regional, social and racial. The document also recognises the failure in the past to secure sufficient training in the right skills for the right people by the traditional method of leaving it largely to the employers. It rightly calls for a major change in attitude on adult training.

The MSC's preferred solution to the problems it outlines is a largely privatised employer-led training system which gives insufficient recognition of the importance of combining education training and work in a continuous provision. It must be in doubt whether this can bring about the changes in attitude called for and the "flexible" "highly motivated" workforce so beloved of MSC policy documents. Literacy, numeracy and communications underpin most occupational skills. More importantly, they give adults confidence and control and the ability to use the kind of information network described in the documents as the prerequisite of successful training schemes. It is difficult to see how the training system proposed here could tackle these problems which will require a comprehensive approach to the education of adults firmly established in the post-school sector at all levels with appropriate financial support for individuals and institutions.

Those in work are specifically identified as a priority group for skills updating and acquisition. Despite call-



ing and training opportunities for disadvantaged minorities, the document offers no real challenge to the forces deeply embedded in our labour market system which marginalise black people, women and those adult males clearly classified as unskilled or semi-skilled who are increasingly likely to be out of a job. In an extraordinary breast beating exercise the MSC castigates itself for the "failure" of its own small scale training programmes for the unemployed - TOPS and the Training for Skills Programme. It suggests the virtual abandonment of what it calls "speculative training or training for stock".

Of course it is unrealistic to assume that we can train our way out of

3,500,000 unemployed or that the root of all our economic problems is key skill shortages in the workforce, but the rhetoric against speculative training points to the MSC's desire, which is nowhere coherently argued, to reduce its own interventionist role in the labour market - a role that has more merit than is given credit for in this strategy. This is not surprising, given the current political climate which has, of course, remained unchanged since the document's publication in April. But the MSC's concern about "displacement" as a result of its own training schemes is surely somewhat ingenious given the substantial loss of whole areas of industrial employment and therefore training opportunities over the past few years. The document is silent about a whole body of theory, some of it developed from the MSC's own research, about the role that training can play in various strategies for economic change and recovery.

There are a whole range of mechanisms dear to the heart of policy makers in more progressive times and credited with some success elsewhere which could be used to tackle some of the fundamental problems the strategy document identifies. Some of these have already been taken on board - for example, the desirability of continuing young people's education and training for as long as possible in order to protect them from competing in unequal terms in a harsh and unwelcoming labour market. Other devices such as the shorter working week, work sharing, the restriction of working time, recurrent education and

above all Paid Educational Leave are missing. The absence of this perspective from an adult training strategy is surely a serious lack. For example, though the precise nature of entitlement and provision varies from country to country, has been fairly widely accepted in Europe as an instrument of manpower planning, however limited, and as a means of propagating the virtues of social and economic change. And of course the national training policy could play as an instrument of economic redistribution, as a means of easing the burden of unemployment and as a means of lessening the chances of long term unemployment.

As yet we do not have many clues as to the precise mechanisms for delivery of no adult training strategy. Even the emphasis on local delivery, attractive at first glance must be regarded as suspect, given how little that is intelligible the MSC has to say about what a strategic approach to its training strategy. Given the MSC wishes to reduce its own interventionist role in the labour market both in terms of job creating and training, and given the lack of any firm position as to the delivery of an adult training strategy it is likely that local delivery may prove to be the conscious or unconscious mechanism whereby the real redistribution process takes place - between the inner cities and the shires, between those in and out of work, between women and men and between those who have access to education and training and those who do not.

The author teaches at Southwark Institute of Adult Education and is vice chairman of the London Borough of Newham education committee.

Building an adult system

by Frankie Todd

In years to come the 1980s will probably be viewed as the decade that saw a significant shift in the provision of education for adults.

For while traditional non-vocational adult education, has come under economic attack, continuing vocational education, having developed steadily through the 1970s, is currently expanding at an unprecedented rate.

Part of the impetus for this expansion is a response by higher education institutions to a forecast decline in student numbers, but it is also the result of policy expectations among professional bodies and employers which makes continued work-related learning very much the norm in many areas of working life.

One estimate is that during 1976-77 up to eight million people may have done some learning related to work. There have been many new initiatives since that date which have added substantially to that number.

Now central government has entered the arena with the setting up of two new schemes: the PICKUP (Professional, Industrial and Commercial Updating) Scheme from the Department of Education and Science and the Open Tech under the aegis of the Manpower Services Commission. The new developments combined look set to transform the face of post-experience vocational education over the next few years. The question is, into what?

There is no doubt of the need to continue learning in order to achieve and maintain a high standard of work performance. Mistakes cost lives in some tragic instances, while less dramatic but still serious penalties include lost time and money. There are also decrements in the quality of life for clients and consumers. Mistakes in day to day practice can scarcely be humane, and so continuing education is inevitably bound up with professional ethics.

Existing provision is bewilderingly pluralist with involvement from professional and corporate associations, trade unions, the public utilities, industry and commerce, the Business and Technician Education Council, and local and central government departments, in addition to institutions of further and higher education. Since there is no validating system there is

plenty of room for cowboy companies offering training of indifferent quality at inflated prices.

Several trends are emerging. One is the use of "open" learning systems which enable access to learning at a time and place to suit the client. The Open University, for instance, using distance-learning techniques, has produced post-experience courses in a range of areas since the Venables report. More recently several management colleges have made their face-to-face teaching "open" to people in work - who may pick up on teaching at times that suit them best.

Other trends are education that is "tailor-made" for the requirements of a specific group and the proliferation of "in-house" training as opposed to expensive residential courses. There is also a small but positive trend for groups of practitioners to devise their own learning, collaborating to tackle job-related problems independently of outside expertise.

Perhaps the most significant feature of recent years has been the rise of "updating" as a rationale for post-experience education. This is not unconnected with the difficulties experienced by non-vocational education. The emphasis there on education as an agency for enlightenment and self-development is replaced in an updating approach, such as PICKUP's, by an emphasis on work-related content. But can we afford to design post-experience education on this criterion alone?

The experience of the National Health Service's continuing education unit for architectural staff suggests that updating is only one element of a useful post-experience education service. This unit, set up at the Institute of Advanced Architectural Studies, University of York, in 1979 and funded by the Department of Health and Social Security, has a brief to provide an educational service for architectural staff in the health service and in related private architectural practices.

The unit's effort was initially concentrated on three main areas: a programme of research into the educational needs of different staff groupings; the development of educational events, mainly held "in-house" around the country, and based on the insights gained from this research; and the design and production of educational materials. In this was added a service offering information on educational events and materials widely available.

However, we soon found that unless the organization has an internal system for planning continuing education, participation in learning tends to take place on an ad hoc basis with correspondingly patchy results. Accordingly,

a substantial part of our effort now consists of working with senior management at health service offices to plan educational programmes. These take into account organizational, professional and individual needs. This role of our work is as important as the resulting education itself.

A purely "updating" approach focuses upon learning content at the expense of the learning process and it addresses only instrumental aspects of the person. But if we look at mistakes in performance it is clear that they reflect the whole person. To redress them we need not just more knowledge, but also to support reflection upon practice and the development of maturity and self-awareness. This cannot be achieved by passive, impersonal teaching. It requires an emphasis on active, self-directed learning.

The most exciting challenge to post-experience education is that its whole raison d'être is to improve performance. The greatest threat to its success currently might be built out of the spare capacity of higher education instead of being designed for the job. A good continuing education service needs staff development for the teachers and planners who run it. It needs ongoing research to ensure the appropriateness of what is offered. It needs a good information service and the development of educational materials. It also requires work with client organizations both to help them plan continuing education effectively, and to start an "enabling" process within the organization so that education can be put into effect.

The quality of existing provision varies enormously. Some of it is inadequate in ways that make it hard to construct a good service simply by expanding or extending it. It may exist to improve practice - but too often is predicated upon the principles of knowledge transmission. Its participants are experienced - but this expertise is not necessarily incorporated into the learning situation as an acknowledged resource. Changes in practice can only be implemented within the work setting - yet existing resources are too often concentrated on the practitioner in the classroom rather than on the practitioner in institutional life.

The possibilities are all there. But it remains to be seen whether they will be developed in a coherent and principled way.

The author is a research fellow at the NHS continuing education unit for architectural staff, Institute of Advanced Architectural Studies, University of York.

education for employment

Beware becoming son of YOP

by John Pardoe

Despite repeated assurances by the chairman of the Manpower Services Commission and the Secretary of State for Employment that the Youth Training Scheme is on course to meet its target, few people seem to believe it. Comment in the press over the last few weeks has been increasingly sceptical.

Some of this scepticism should be taken with a hefty pinch of salt. Many of the sceptics have a professional axe to grind. Some professional educators simply cannot believe that anything can be delivered without their intermediary. They think they have an inalienable right to the monopoly provision of education, training and anything else to do with young people. They could all do them with a training course in professional humility and be forced to study the collected works by Ivyn Illich!

There are, however, some very real problems with the Youth Training Scheme which the Manpower Services Commission will have to get to grips with very shortly if the whole scheme is not to end up smelling like the Youth Opportunities Scheme.

The YOP failed because it was not a vocational training scheme. Most of its young participants received no effective training at all and came to see the scheme as a cynical ruse to take their names off the unemployment register.

The Youth Training Scheme was never intended to be son of YOP. Yet some of the schemes now being approved by the area manpower boards have so insignificant a training content as to make a mockery of the scheme's name.

Part of the problem is that most of the big names in British industry have simply failed to meet the challenge of the scheme.

In the early days of the new scheme it was hoped that a high proportion of places would be provided by those big companies which had always given excellent training to their own staff. It was assumed that they would welcome the chance to fill this while at the same time demonstrating the excellence of their training and their sense of social responsibility.

Unfortunately, it has not worked out like that. The depth of the recession has been greater than anyone expected and has hit even the largest companies. Mass redundancies have not created the best climate in which to take on a large number of new young trainees.

The result is that the number of places provided by these big companies is far smaller than was originally hoped. The Manpower Services Commission has therefore had to look to local authorities and entre-



preneurial managing agents for more places than it originally intended. Sight and Sound Education Limited always intended to play an active role in the Youth Training Scheme. Originally, we did not envisage being a managing agent. We assumed that our role would be to provide off-the-job training to other managing agents, who would probably be large industrial and commercial employers.

Sight and Sound has a long record of training for the Manpower Services Commission stretching back to 1973. It offered the MSC exactly what it wanted: training centres open all the year round, staggered weekly intake, and intensive and highly cost-effective skills courses. Moreover, Sight and Sound's programme of learning techniques assured the MSC that wherever a Sight and Sound centre operated the quality of the training would be identical.

The company is the largest clerical and commercial training organization in the United Kingdom and the most widely used keyboard training organization in the world, where its training systems are in use in 40 countries, 19 languages and on 23 different keyboards.

In 1981 Sight and Sound decided to cooperate with the MSC in the pilot scheme for the YTS, and provided 1,100 training places for work skills courses. We offered 26 weeks off-the-job training and 24 weeks work experience.

It was our experience and success in this pilot scheme which convinced us that we could add should become a managing agent under the Youth Training Scheme.

Sight and Sound had already signed managing agency agreements with the MSC for over 4,000 training places in nine training centres at London - Bath University, Bristol, Birmingham, Manchester, Liverpool, Sheffield, Glasgow and Edinburgh.

We are determined that for our trainees at least the YTS will offer

what its name implies, and not occupational therapy for the unemployed! Instead of the bare minimum of 13 weeks off-the-job training - which seems far too often to have become the maximum - we are providing 20 weeks. The curriculum includes keyboarding, computer studies, copy-typing, word processing, data entry, audio-typing, shorthand, book-keeping, payroll and life and social skills. Trainees can take some or all of these according to their ambitions and aptitudes and can change direction at any time.

A typical trainee will start with eight weeks full-time training in a Sight and Sound centre. This will be followed by about three months work experience with one day a week back in the training centre. There will then be a further period of full-time training of some five weeks, followed by a final period of five to six months' work experience with day release back in our centre. The 20 weeks off-the-job training is built up therefore of 13 weeks full-time training and 36 days of day release.

There are those in the MSC and elsewhere who scratch their heads in wonder at how all this can be done within the block grant. While others in industry and colleges of further education moan and groan about the lack of funds and pare their training to the bone to make ends meet, Sight and Sound has intentionally picked up the Government's challenge on behalf of the private sector of industry.

At this stage, I am profoundly glad that we decided to become a managing agent in our own right. Some of the inquiries we are receiving from other managing agents about providing their off-the-job training are, frankly, scandalous. They seem to think they can use Sight and Sound's training reputation as a fig-leaf to hide the miserable cheap-skate schemes they are hoping in for on unsuspecting young people. If area manpower boards are passing these schemes it can only be out of desperation or carelessness.

Sight and Sound is happy to provide first-class off-the-job training either on our own premises or on those of another managing agent or employer. But we do not wish to talk to people who see off-the-job training as the excessive price they have to pay for cheap labour.

Anyone who wants to see what British industry ought to be doing under the YTS must care to visit ICT's agricultural division at Billingham and the Sight and Sound training centre there. At least no one at ICT seems to think that the YTS fell off the back of a lorry just for their benefit.

The author is managing director of Sight and Sound Education Ltd.

Dancing with the devil

by Chris Webb

It is probably worth restating the origin of the Notting Dale Technology Centre, as it puts both its educational thrust and its "enterprise" into a far broader context than much of the usual debate concerning information technology and vocational training. As long ago as 1977/78 the work of various students at the Urban Studies Centre was revealing both a contraction and a transformation of our local west London economy.

These two effects were producing a bleak prospect for both youth and adult employment and this opinion was well supported by research reports from Europe, both indicating net job loss due to the application of microtechnology in various "office" contexts. Equally clear was the fact that information technology, penetrating as it does all the occupational groupings that economists can devise, was going to be both a job killer, creator and transformer simultaneously - hence, the Faustian connotation of the title.

Notting Dale Technology Centre, then, was an attempt to address, in a

local context, these issues of job-skill mismatch and overall decline of job opportunity. To attempt this we felt that the "open access" - learning by doing" model of the Urban Studies Centre could be translated into an effective technology centre.

Its aims would be three-fold. One - to set up a learning base for young, unemployed people within electronic systems, computers and modern office facilities available to a range of people within the "community", from small businessmen to groups inspired by need, such as the disabled or redundant. Three - to use these connections to develop services and products within the technology, so that jobs would be created within locally spawned firms. This last intention in particular can look like mere rhetoric given the inability of nation-states to cope with this within the developed world.

It must be clear to all technophobic adults that the young, in general, learn with impressive speed and facility within computer-based technology. At Notting Dale this was translated into two major policies. One, that there would be no academic

continued on page 24

Encyclopaedia of occupational health and safety 3rd edition (completely revised and updated)

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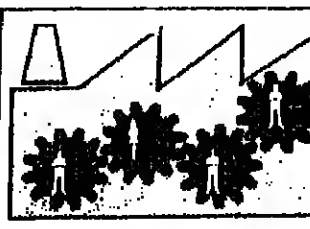
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Polytechnics continued

BRISTOL POLYTECHNIC

Department of Town & Country Planning

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Ref: L/59

Applicants are invited from well qualified persons with specialist interests in Physical Geography and resource management for the post of Associate Lecturer II or Senior Lecturer for one year commencing on 1 September 1983 and terminating on 31 August 1984. The person appointed will contribute to the teaching of Physical Geography, particularly Biogeography including the management of natural resources and some climatology, at honours degree level. Previous research and/or teaching experience would be an advantage.

Associate Lecturer posts are not full-time, but require commitment for half a week on a regular basis. Salary is 50% of the full-time salary scale. Salary scale: £11,500-£17,215-£21,560 (per annum). Salary scale: £11,500-£17,215-£21,560 (per annum).

The appointment will be made on the appropriate scale according to relevant previous service/experience. Progression from the L1 scale to the L2 scale is in accordance with the provisions of the Dunham Further Education Report.

For further details and an application form, to be returned by 15 July 1983, please contact the Personnel Office, Bristol Polytechnic, Colston House Lane, Fenchurch, Bristol or Tel: Bristol 85281, Ext 216 or 217.

Please quote reference number L59 in all communications.

PAISLEY COLLEGE

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Applications are invited from holders of a good honours degree, and with relevant industrial, research or teaching experience for the above post.

The successful candidate will be expected to teach to honours degree level and to contribute to research, consultancy, or courses for industry. The following areas are of particular interest: Control Systems, Microelectronics, Electronic Circuit Design, Electronic Equipment Manufacture and Test, Communication Systems, Digital Systems, Microwaves and Optics.

Salary Scale - Lecturer 'A' £9,313 to £13,128

Application forms and further particulars may be obtained from The Personnel Office, Paisley College of Technology, High Street, Paisley PA1 2BE (Tel: 041-887 1241, Ext. 230).

Department of Civil Engineering and Building

LECTURER II / SENIOR LECTURER IN BUILDING

Salary £7,215-£13,443 pa

Preference will be given to applicants holding a degree in building and construction.

Applicants must also have appropriate experience in the building industry and have a minimum of five years' experience in the area of building technology and management.

Further particulars and application forms are available from:

The Personnel Office, The Polytechnic of Wales, Penarth, Glamorgan CF37 1DL.

Tel: 0443 406133.

Ext 320.

Closing date: 10th July 1983.

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University of London
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RESEARCH
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Applications are invited for research tutorships in the Department of Physics, Goldsmiths College, University of London. The successful candidate will be responsible for the day-to-day running of the department and will be expected to contribute to the research programme.

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Closing date for applications: 15 July 1983. The successful candidate will be offered a salary in the range £10,000-£12,000 p.a. depending on experience.

The University of
Sheffield

Office of the Registrar and
the Principal

ADMINISTRATIVE
ASSISTANTS

Applications are invited for administrative assistants in the Office of the Registrar and the Principal, University of Sheffield.

Applicants should have experience in administrative work and be able to handle a variety of tasks. The successful candidate will be offered a salary in the range £10,000-£12,000 p.a. depending on experience.

Applicants for the post, which is available for 3 years from 1 October 1983, should send a CV and three references to the Office of the Registrar and the Principal, University of Sheffield, Sheffield S10 2TN.

Closing date for applications: 15 July 1983. The successful candidate will be offered a salary in the range £10,000-£12,000 p.a. depending on experience.

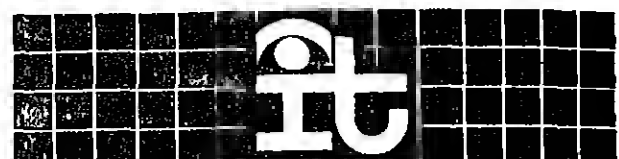
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EducationChrist Church College
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Canterbury
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Applications are invited for a lectureship in Education at Christ Church College, Canterbury. The successful candidate will be offered a salary in the range £10,000-£12,000 p.a. depending on experience.

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Polytechnics continued

North Staffordshire
Polytechnic

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Senior Lecturer £19,000-£21,000 p.a.
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Closing date: 15 July 1983.

Applicants should have experience in design and glassmaking. The successful candidate will be offered a salary in the range £15,000-£17,000 p.a. depending on experience.

Applicants for the post, which is available for 3 years from 1 October 1983, should send a CV and three references to the Department of Design, North Staffordshire Polytechnic, Stoke-on-Trent ST4 2DA.

Closing date for applications: 15 July 1983. The successful candidate will be offered a salary in the range £15,000-£17,000 p.a. depending on experience.

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Polytechnic
Department of Computing

RESEARCH
ASSISTANTS
IN COMPUTING (2
posts)

Basic Education in Numeracy and Technology.
Salary: £4,000-£5,000 p.a.

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Applicants for the post, which is available for 3 years from 1 October 1983, should send a CV and three references to the Department of Computing, Brighton Polytechnic, Brighton BN1 9QJ.

Closing date for applications: 15 July 1983. The successful candidate will be offered a salary in the range £4,000-£5,000 p.a. depending on experience.

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In addition to proven administrative experience in a similar or directly related field, applicants should possess a sound knowledge of the Union's financial and administrative systems.

Salary on scale £6,370-£8,274 p.a. (NJC APT-C Scheme Points 31-36).

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Overseas

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Lectureship

An Honours degree, but preferably as for Senior Lectureship as above.

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Further information may be obtained either from Mr J. Jennings, SA Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE, or from the Registrar (Attention: Appointments Office) University of Cape Town, Rondebosch 7700, South Africa, by whom applications (quoting ref. no. E368) must be received not later than 22 July 1983.

The University's policy is not to discriminate on the grounds of sex, race or religion. Further information on the implementation of this policy is obtainable on request.

For further details write to the Registrar, University of Cape Town, Rondebosch 7700, South Africa.

Closing date for applications: 15 July 1983. The successful candidate will be offered a salary in the range R16 557-R24 045 p.a. depending on experience.

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Applicants should also have a postgraduate degree and have research and teaching experience. They should be willing to share in undergraduate teaching as well as the Honours and Masters programme and to supervise Masters and Doctoral research students.

Preference will be given to candidates whose special interest lies in Christian Studies, including the history of doctrine and church and society, and/or Science of Religion, including the religion and society interface. Knowledge of and interest in Southern Africa will be a recommendation.

Staff benefits include a housing subsidy subject to State regulations, pension fund, medical aid and group life assurance, a 75% remission on tuition fees for dependents at UCT and generous study leave privileges.

Applicants should submit a curriculum vitae, stating qualifications, range of teaching and research experience, current academic interests, publications, when available if appointed, present salary and the names and addresses of three referees whom the University may approach direct.

Further information may be obtained either from Mr J. Jennings, SA Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE, or from the Registrar (Attention: Appointments Office) University of Cape Town, Rondebosch 7700, South Africa, by whom applications (quoting ref. no. E367) must be received not later than 22 July 1983.

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Don's diary

Monday

Term is shuddering to an end. With one week to go my desk is piled about 12 inches high with examination scripts, answered letters and accumulated detritus of academic bureaucracy. I contemplate a mild, lucky 50-50 chance of getting a match in the lot. But the penalties for arson in Massachusetts are high so I reject that.

Instead I avert my gaze to my shelf of "books awaiting review". It is sagging under the weight of 19 books. I pick up one and discover it has been awaiting my review for nearly two years. I resolve to begin reading it this morning.

The first three pages consist of acknowledgements to more than 100 of the many unpleasant and disreputable scholars in the field. The contents of my unfavourable review are just beginning to form in my mind when the phone rings.

It turns out to be a long-distance call from a highly distrustful lady in Boise, Idaho. She introduces herself as the mother of a student in my class to whom I have recently awarded a grade of E (equals fail). She pleads that her son's record be amended to P (equals pass) on the ground that the lad's poor performance in the exam arose from distress at his father's running away with a younger woman.

While she talks I flip through the exam scripts on my desk and happen upon her son's effort. His essay on Gandhi's role as leader of the Chinese nationalist movement was no doubt influenced by the domestic tragedy. When she finishes I forbear from pointing out that if parental infidelity were to be the criterion of success in my class they would probably all be shining on the dean's list. Respect for what are evidently the sterner morals of Idaho restrains me. Instead I give her my standard answer (already rehearsed several times in recent days in reply to a succession of sob stories from students dissatisfied with their grades): the grade cannot be changed (bad news) but (good news) a grade of E (equals fail) is not counted as part of a student's overall grade-point average.

This was one of the victories of the 1960s student movement apparently. This quirk of the system means that it is better for your record if you fail than if you get a grade of C or D. Thus comforted, the mother returns to her domestic miseries and I to my academic ones.

Tuesday

The annual salary row. This campus is not unionized so the annual salary rises are decided by the dean of the faculty on the recommendation of the chairman of the department. This year the dean's guidelines are that salaries should increase by between 4 and 6 per cent depending on "merit". Unfortunately the new chairman of our department has decided on a new policy of what he calls "equity". It soon appears that by this he means "equality" since his recommendation is that the poorer members of the department should get 18 per cent while the richer ones should get only 2 per cent.

A meeting of senior professors dissolves into fierce acrimony after three hours of debate with the chairman denounced as a "socialist" (mildly worse). I drive off recalling nostalgically how these matters are resolved in civilized fashion in Britain. Come back the Association of University Teachers, all is forgiven!

Wednesday

I decide to spend the day sequestered in the new university library building. I head for the microfilm section and start winding the spool of the Sheffield.

PhD thesis which is my main reading assignment of the day. I reach the beginning and am just about to start reading when a strange scurrying noise breaks my concentration. It seems to come from inside the wall next to me. A sudden yelp or scream follows, also from behind the plaster.

A helpful library assistant rushes up to reassure me that this is quite normal: apparently a pack of racoons have found their way inside the heating or ventilation shafts of the building and all efforts to expel them have failed thus far. The alarming noises show no sign of abating and prevent me from concentrating. I give up my noble attempt to work and go and sit in the sun.

Thursday

Last faculty meeting of the term. About 200 present. Furious debate on a motion calling on the faculty to rescind the condemnation of the university president which they passed at the previous meeting. The president who retires at the end of the year (and whose last meeting this is) sits and listens impassively as his champions and detractors fight it out.

Eventually the faculty votes narrowly to rescind its previous condemnation. The meeting concludes with the chairman of the faculty senate (who had been in the forefront of the attacks on the president's supposedly frightful actions) delivering a farewell speech praising the president and all his works.

Friday

I'm exhausted after all this academic lawfare. I stay at home and mow the lawn.

Saturday

Drop in at the university to pick up the academic robes which the university has hired for me to wear at the commencement celebrations tomorrow. Miffed to find that instead of procuring the glorious colours of my distant British *alma mater*, they have provided me with an undistinguished-looking, sack-like garment with a zip up the front.

Sunday

Commencement. For some reason Americans insist on calling the terminal occasion of the academic year by this inappropriate name. Clad in my hired gown (which balloons up preposterously in the breeze) I join the academic procession into the open-air amphitheatre. About 10,000 people present, including the "Class of '83". Biggest moment of the day is when homonym graduate Mikhail Baryshnikov walks forward to accept his degree: the crowd cheers wildly and Baryshnikov seems almost ready to dance a *pas de deux* with the dean.

On the way home I stop off at my office to try to clear my desk. An hour of vigorous stuffing of the wastepaper basket disposes of most outstanding business. As I leave I decide to try a new tack on the book review problem. I pick up the most recent book sent for review and promise myself to finish the review within three days. My reputation for speed and efficiency thus restored (at any rate in my own mind) I head away from campus. It has been an unusually productive week.

Bernard Wasserstein

The author is professor of history at Brandeis University in Massachusetts.

One of the most moving experiences I have had recently was in a *scuola media* (or middle school) in Rome. The school is situated in the centre of the city with a view of Roman walls from its windows. It is in an old building which by British standards is poorly maintained and badly equipped. Paint is peeling from the walls, the windows are dirty, the furniture is old and broken. There is a small library with a few ancient and ragged books locked away in large glass-fronted bookcases.

A tiny courtyard serves as a playground and is the only place where the children can have any physical education. A volleyball net is strung across it from wall to wall, so that the boundaries of the court are the classroom walls on either side. Although the school's pupils are aged 11 to 14 there are no science laboratories. The whole place has a decrepit and tatty air about it. Moreover the classrooms are small and overcrowded; one class has to receive its education in a partitioned-off corridor.

Inside this seemingly unpropitious environment there are, however, some remarkable things going on. While the buildings and equipment leave a great deal to be desired, it is what the Italians call an experimental school which is innovative in several respects. It is the best demonstration I have seen for a long time that it is the human resources that really count. While most Italian schools end at lunch time, this is a full-time school which continues until five in the evening. Priority is given to children from families with social needs who tend to come from outside the district. But it is a socially mixed school also serving the needs of middle-class families where both parents are working.

While the teaching staff work different hours to those in conventional schools they do not work longer hours because there are more of them. In a period of teacher surplus perhaps this might be tried here? Extending the school day in some nursery and primary schools by having a more generous pupil-teacher ratio in order to help single parents and working mothers is something I have advocated before, but it has only been tried in Britain on a very limited scale.

While Italian schools appear as a general rule to be rather poor at providing pastoral care, advice on the next stage of education and career guidance, this school has made special efforts in this area. There is nothing remarkable about this from the British point of view. Here it is doing what most good schools in the UK should take for granted. The difference lies in the use of parents, who come into the school to talk about their own jobs to

Reflections of a literary Don Quixote

Last spring I retired as professor of English literature after five years in a large state university on the east coast of America. Prior to that I held a chair of English at the University of Durham for almost a decade and before that I taught for some 20 years in the United States at various colleges and universities, ivy-league and non-ivy-league. A latter-day Don Quixote, I sought unsuccessfully an institution of higher learning whose ideals I could respect and where I could pursue my career in an atmosphere of civilized aestheticism, introducing the young to those eternal virtues embodied in enduring works of English literature. Of course, the goal was never realized, but in the disheartening progress I assimilated many impressions bearing upon the teaching and studying of English literature in British and American universities and colleges.

Since my return I have been the recipient of many a well-intentioned inquiry about my career, although the pronouncement that one was once a university professor of English is often an effective terminus to conversation. When, however, it transpires that most of my teaching was in the United States the responses are sadly similar in their manifestations of ignorance and unawareness. The common gambit is: "I expect you find the standards horribly low over there" or "It must be a bit of a caper" or, as the wife of a Durham University professor remarked: "After all it must be very simple." Such responses are disheartening, of course.

Learning without handicap



Tessa Blackstone

groups of children. Again I have advocated before greater efforts to involve parents particularly at the secondary level, in advice and discussion about different occupations. Of course this involves effort and organization, of course not all parents will want to participate in this way. However, these arguments are not convincing enough to abandon the idea.

The Italian middle school, like all Italian schools, is governed by a council consisting of parents and teachers (and in the secondary schools pupils too). Each form also has a class council consisting of elected parents and pupils and the form teacher. These bodies meet regularly. Thus there is more opportunity than in most British schools for teachers to get to know at least some parents quite well and to find out what their skills and interests are and whether or how they might contribute to the life of the school.

Perhaps as a consequence, the school I visited was also using parents to teach small groups of children in special areas outside the normal curriculum. One mother, who is an archaeologist, was working with a group of 12-year-olds on the origins, growth and development of Rome, using maps and old prints, which the school had photocopied for her. A computer scientist was coming in to give extra tuition to the pupils on the basics of computing. Could we involve parents and thus of no worth whatsoever.

as one must conclude that notions of American higher education are as bygone as the Roman Empire. Teaching English literature in America at graduate and undergraduate levels can be, and in the main is, an exhilarating experience. Of course, many more people proportionately attend institutions of higher learning in the United States than in England and that can on occasion lead to a distinct modification of standards. On the other hand, it allows many young men and women of marked ability who would not otherwise see the inside of a university to benefit from what the institution offers.

Indeed, a heartening aspect of teaching in America is the zeal and enthusiasm with which many students approach their discipline. At the post-graduate level this is particularly apparent as a seriousness of concern, a professionalism, which is instilled into candidates from the beginning. If those candidates come well prepared, as they can from a number of lesser colleges and universities across the country, they will, at say Yale, Berkeley, Columbia, or any of a dozen other such places, get ahead like a house on fire.

Of course, there are detrimental aspects of American graduate training in all disciplines, especially English literature. Foremost is the ridiculous stress, amounting to mania, upon publication. The cascade of articles and books, many quite worthless, that pour from typewriters attests to this misguided drive.

Again, people compete furiously for fellowships, adjudication over which the number of articles and books - their quantity rather than their quality - too often plays a determining part. And most serious of all, some graduate students and junior faculty neglect their classroom responsibilities in order to impose upon a limited audi-

more parents in extra-curricular activities of this kind outside normal school hours in Britain?

It was, however, in another area that this school was most memorable. By law, handicapped children are integrated into the ordinary schools in Italy. For several years now they have been doing what the Wamock report has recommended in Britain, but which is a long way from being implemented. In this particular school I observed three handicapped children in different classes.

The first was a stone-deaf 13-year-old girl, who apparently had little speech when she arrived at the school two years earlier and was shy and withdrawn. She was by contrast now talking fluently, outgoing and completely accepted by the other children in the class among whom she had several close friends. All this had been accomplished by assigning an extra teacher to her class for part of the day to give her special help, by the readiness of other pupils to help her and by her own determination.

The second was a boy with Down's Syndrome who worked in an ordinary classroom with a specially assigned teacher, who was able to read and who proudly showed me his exercise book full of writing. Some of the other children sometimes worked in small groups with him and the extra teacher. This is one of the means the Italians have used to provide extra remedial help in a system where remedial education is poorly developed.

The third child was an autistic girl. She was severely disturbed. Virtually unable to communicate with other human beings, the only sounds she made were grunts and whines, screwing up her face in apparent misery. The children took it in turns to sit next to her and they also helped her eat her school lunch and took her to the lavatory.

All this was achieved in a poor building without any special facilities. There was no lift, merely a ramp to deal with steps at the entrance for those children who are wheelchair bound. Since these children could not reach the second floor, arrangements were made to teach them on the first.

Clearly this is not an ideal situation. Nevertheless, the Italians have decided it is better to make for the time being with makeshift arrangements than to shut away handicapped children in special institutions, denying them contact with their more fortunate peers and preventing the latter from learning to love and care for other children less privileged than themselves. Buildings matter, but this school demonstrated that some of the deficiencies can be overcome.

ence their ephemeral interpretations of, say, a novel by Lawrence, a poem by Donne, or an essay by Johnson. Hovering in the background, too, is the administration, a disgracefully powerful body in American academia, forever blindly pushing for publication. During my state university days I used often to wonder what state legislators would do if they knew how strongly publication was stressed at the expense of what should be primary in all classrooms: the teaching.

On the other hand, American graduate training in English literature, waris and all, can supply a valuable foundation for aspiring teachers. At many universities there still remain, although their ranks have thinned with the years, a number of senior teachers, men and women, who give of their best in the seminar and lecture hall as well as of their own private time. These gifted people continue to convey the life and vitality of literature to their students; furthermore they can supervise and temper stringent, constructive criticism with human understanding. Above all, they lead neophytes to an awareness of the boundless significance of their calling; and their perspectives, shaped by reason yet instinct with critical perceptions, render the seminar and lecture uniquely rewarding. In such respects the American graduate and undergraduate training seems frequently superior to its British counterpart; the hapless student is quite often left too long floundering on his or her own.

J. L. Bradley

The author has recently retired as professor of English literature at an American university. He was previously professor of English at Durham University.

LETTERS TO THE EDITOR

How the two-year degree could serve a double purpose

Sir, - Dr Perry is right (*THES* June 24). The amount of knowledge around is increasing rapidly - so much so that no individual can hope to be acquainted with more than a tiny part of it, and with the details of what anybody learns are out of date within a few years. A central function of higher education is the determination of how different chunks of knowledge are to be parcelled up.

Current views about the desirable length of initial courses range from zero (among extreme protagonists of recurrent education) to a very long period (among those who believe that the science of "x" is not really worth learning unless the student has learned to think like a practising research "x"ologist). Even a moment's reflection suggests the improbability that the

same initial length of course will be appropriate for all students or for all subjects, yet in England we offer most students only one package - five years of increasingly specialized full-time study between the ages of 16 and 21.

This is too much and too narrow for many graduates who lack the ability to see how their specialist knowledge relates to the specialist knowledge of other people (such as engineers who are unable to write the kind of policy paper that would enable them to be taken seriously as contenders for management positions). It is too little for some others who need a period of time in the great research in oriented graduate schools in the United States before they can be said to have fully mastered their subject. Yet we gear most of our finance of

institutions and students to this A-level-specialized honours degree package.

A two-year, relatively unspecialized, pass degree would be a terminal qualification for some students but many others would build on it and specialist skills in particular areas of academic interest or vocational need.

If properly designed, such courses would enable students to develop an awareness of the principles of a broad disciplinary area and some of its links with other areas of knowledge that would enable them to add new specialist knowledge as it became relevant to their evolving needs and interests throughout their lives.

Incidentally the Scottish system got

slightly metamorphosed in its trip to the Antipodes. The Scottish ordinary degree is taken after four years of post compulsory education (one in school, three of fairly general study in university). A basic two-year pass degree course in England with an array of subsequent specialist opportunities would be not an irresponsible step in the dark but a move towards a tried and tested system where, on the whole, the separation between universities and the society they serve is less sharp than in England.

Yours sincerely,
GARETH WILLIAMS,
Director, Institute for Research and Development in Post Compulsory Education,
Lancaster University.

Nuclear scientist's dismissal

Sir, - We, as academic researchers, are extremely disturbed to hear of the fate of a fellow researcher, a senior nuclear scientist, Dr Ross Hesketh, who has recently been dismissed by the Central Electricity Generating Board (CEGB). His former employers state that the reasons for Dr Hesketh's dismissal are, *inter alia*, refusing to move laboratories in an internal reorganization, and Dr Hesketh's speaking to the press after a clear warning not to do so. However, there is clear evidence to suggest that the crucial reason for Dr Hesketh's dismissal by the CEGB is his outspoken views on the question of the harnessing of CEGB plutonium with the United States under a military agreement. We understand that Dr Hesketh is a supporter of civil nuclear power - but not of its hiding nuclear weapons programmes whether in Britain or the United States. He is properly concerned that the distinction between civil and military nuclear programmes be clearly maintained.

The evidence suggests that it is Dr Hesketh's persistence in this aim that has caused his dismissal. This should be a warning to all researchers in science and in technology, whether academically employed or otherwise that speaking out of turn on matters of conscience (Dr Hesketh is a Quaker) is a dangerous step to take.

We are appalled that Dr Hesketh should now be unemployed for publicly discussing matters which are clearly of great importance. The British scientific community has a fine record of supporting dissenting scientists in other nations. We call for similar support for Dr Hesketh. Time may be of the essence in this case.

Yours faithfully,
ALAN REDDISH,
DAVID LOWRY,
J. S. SMITH,
T. ORESZCZYN,
J. GILL,
MARK BARRETT,
ROBERT LOWE,
CATHERINE APPOLD,
BARRIE JONES,
Energy Research Group,
The Open University.

Yours faithfully,
K. KATE BERTRAM,
Ricardo's,
Grafham,
Peworth, Sussex.

copyshop in this area, therefore have to resort to dubious, sleight of hand and waving of notes - from my dolo. Either that, or do a stint of close to ten hours or so at a secondhand portable Olympia.

Please tell me, why are these deadlines so impractically short? University, college and polytechnic assisting? An indication that the job-like the old Jewish tailor's best suit was always "previously bespoke" - usually for a nephew. Or due to the ineptitude of your own advertising department. I don't think it's the latter. But I'd like to accuse the former. And I hope that this letter at least gets somewhere. Like 20 to print.

Yours sincerely,
GRAHAM WHITE,
The Old Post Office,
Feock,
Truro, Cornwall.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Yours faithfully,
MARTYN CHALK,
Course leader,
Visual studies part-time degree,
Humburside College of Higher Education.

Union View

A place for research

Even before their designation, the place of research in the polytechnics was a subject for disagreement. This situation was not helped by many and varied interpretations which were put on the famous "Appendix B" of the Administrative Memorandum under which they were established. It has been made worse by subsequent events.

As early as 1974, the Council for National Academic Awards published its "Rochester Report" which argued the case for research in the institutions where they were required to validate courses. And then, when the Morrison Committee was set up to make the case for dual funding of university research, the CNA set up its own working party to review "Rochester": this working party has yet to report. A common theme which is now heard is the fear that, under financial restraints, it is the research/scholarship activities which will be curtailed.

The case for research in polytechnics and other higher education colleges is clear. They are expected to teach for degrees and higher degrees: their level of scholarship and hence their standard of research must be comparable with those of universities. For this to occur, the public sector must be able to complete on equal terms with the universities for research funding. On any criteria this is not possible at present: the University Grants Committee funds research at about 30 per cent of total budget without judging either the quality of the projects or the capabilities of the institutions beforehand, this being outside their expertise.

APT

Contrast this with the public sector in which the teaching load is high, the research support from local authorities variable, and the priority is for cutting the areas of scholarship before those of teaching when there is any reduction in the advanced further education pool and there is a recipe for significant underrepresentation of the public sector on grant awarding bodies and it becomes even clearer why some protection of their level of scholarship is necessary.

The interest of the National Advisory Body in this subject has resulted in the publication of a discussion document, *The Funding of Research Activity*, in which it seeks the views of interested parties. The general issues of this document concern the definitions of research activity which it divides into updating study, research and consultancy. The specific proposal is that a precise proportion, between one and six per cent, of the advanced further education pool should be earmarked for the first two named activities.

What is not apparent in the NAB document is the interdependence of the three categories upon each other. Thus, for example, updating study means assimilation of the latest developments in a field of teaching: this can mean updating in subject matter or techniques, or in methods of teaching, all of which come about as the result of research activity; yesterday's research finding is today's updating. Consultancy, too, depends on proven research ability: publication of research findings, public lectures and conference papers are the prime measures of this ability. It follows that, while the division into three categories may be useful as a first-order measure, none can exist without the others.

What is really required is a truly adequate level of funding for research activity on a par with universities which would be included within the unit of resource.

Nevertheless, the fact that NAB has produced this paper is, in itself, a recognition of the importance of research within polytechnic and similar colleges and of its need to be protected from the ravages of cuts in public sector funding.

B. E. Davison

The author is chairman of the Association of Polytechnic Teachers research panel.

Police prejudice

Sir, - The essays on "Blacks in Britain" written by recruits at the Hendon police cadet school and released to the press by John Fernandes reveal a disturbing level of anti-black prejudice. The examples published in *The THES*, are, however, considerably milder in tone than some of the comments on "Coloured Immigration", written by relatively experienced probationer constables in the Midlands, which emerged from a controlled investigation by me and Paul Gorman (*Sociology*, 1982, vol 16, pp 1-11).

Among the comments elicited in our study were these: "The majority of youths of the West Indian community are savage ignorant vicious thieving bastards"; and "Over 50 per cent of trouble caused today either is by niggers or because of them. Most of them are just dirty, smelly, backward people who will never change in a million of Sundays. In my opinion most niggers especially Rastafers should be wiped out of distinction [sic]".

Professor Rosen is quoted in your article as saying that "either the selection process tends to pick up people... already having racist views, or their experience in the police leads them to have racist views". Our research, based on a rigorous comparison of experienced probationers, raw recruits, and a matched control group of civilians, provided evidence that the selection process tends to pick up authoritarian personalities, and that experience on the job tends to exacerbate racist attitudes.

Yours faithfully,
ANDREW M. COLMAN,
Department of Psychology,
University of Leicester.

Distance education
Sir, - In writing about the new degree courses being offered by Pune University, your correspondent (A. S. Abraham) introduces his short report with the comment "Distance education has arrived in India." This statement will come as something of a surprise to those who have any familiarity with the history of such developments in that country over the last twenty years. Correspondence education (the term still retained even when other media such as radio are also employed) in fact dates back to 1962 with the establishment of a School of Correspondence Courses and Continuing Education at Delhi University. With the rapid expansion, particularly in the 1970s, of conventional universities (plus several colleges of education and other institutions) now have correspondence institutes offering courses in arts and commerce at degree level to over 100,000 students per year. Whatever novelties there may be in the University of Pune's scheme, the application that it marks a major innovation in Indian university provision is clearly misleading.

Yours sincerely,
RONNIE CARR,
Staff Tutor in Education,
The Open University in Scotland.

Correction
THE last sentence of Professor Martin's letter on architecture published in the issue of June 17 was printed incorrectly. It should have read: "Significantly too, he disparages 'contemporary activity', which produces ideas that challenge - in favour of 'action' which produces objects - that are mute and remain comfortably still."

Application deadlines
Sir, - Either the time is out of joint - oh cursed spittle or someone in your advertising department has thrown - and is continuing to throw - a wobbler and entered a timewarp. Or universities, polytechnics and colleges are taking unemployed academics for an unpleasant joyride.

I refer to several posts which have been recently advertised in your pages where the deadline for applications is so close to its appearance, it's a laughable futility. Some of the closing dates for your issue of June 10, June 20; June 24; June 18; ob. another June 20.

Let me do some hypothetical sums. I receive the *THES* on Friday. The first thing I do is look for the classifieds. I proceed to type out brief letters requesting details, forms, plus whatever ephemera. Moming of June 11, walk down to "new" post office. All requests go first class: have to be there before 10.30 am - otherwise waiting in box till Monday.

Replies trickle through. Long forms to fill in. Details of cv. Recent written work. Covering letter. And so on. No cheap efficient

copyshop in this area, therefore have to resort to dubious, sleight of hand and waving of notes - from my dolo. Either that, or do a stint of close to ten hours or so at a secondhand portable Olympia.

Please tell me, why are these deadlines so impractically short? University, college and polytechnic assisting? An indication that the job-like the old Jewish tailor's best suit was always "previously bespoke" - usually for a nephew. Or due to the ineptitude of your own advertising department. I don't think it's the latter. But I'd like to accuse the former. And I hope that this letter at least gets somewhere. Like 20 to print.

Yours sincerely,
GRAHAM WHITE,
The Old Post Office,
Feock,
Truro, Cornwall.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.